

National Center for Education Statistics

2018 Technology and Engineering Literacy (TEL) Grade 8 Assessment Report Card: Summary Data Tables for National Sample Sizes, Participation Rates, Proportions of SD and ELL Students Identified, and Additional Detail for National Average Scores and Percentage of Students Who Completely/Correctly Finished the Steps in a Sample Task

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Average scores of eighth-grade students assessed in NAEP technology and engineering literacy (TEL), by various student groups: 2014 and 2018

Characteristic	Percentage		TEL overall	
	2014	2018	2014	2018
All students	100	100	150 *	152
Race/ethnicity				
White	54	49	160 *	163
Black	16	13	128 *	132
Hispanic	22	27	138	139
Asian/Pacific Islander	6	7	159 *	169
Asian	5	6	160 *	169
Native Hawaiian/Other Pacific Islander	#	#	142	‡
American Indian/Alaska Native	1	1	146	133
Two or More Races	2 *	3	154	157
Gender				
Male	51	50	149	150
Female	49	50	151 *	155
Eligibility for National School Lunch Program				
Eligible	47	46	135 *	138
Not eligible	46	47	163	164
Information not available	7	7	164	166
Highest level of parental education				
Did not finish high school	7	7	133 *	138
Graduated from high school	15 *	13	137	138
Some education after high school	15 *	13	152	151
Graduated from college	53	55	159 *	163
Unknown	10 *	12	130	130
Type of school				
Public	92	92	149 *	151
Private: Catholic	4	3	163	167
Charter school				
Charter school	4	6	146	149
Public, noncharter	96	94	149 *	151
School location				
City	29	31	144	147
Suburb	35	40	154	156
Town	11	11	149	153
Rural	25 *	18	152	152
Region of the country				
Northeast	17	16	155	154
Midwest	21	21	154	157
South	38	39	147	149
West	24	24	148	152
Status as students with disabilities (SD)				
SD	12	12	116	118
Not SD	88	88	155 *	157
Status as English language learners (ELL)				
ELL	5 *	6	108	106
Not ELL	95 *	94	152 *	155

Rounds to zero.

‡ Reporting standards not met.

* Significantly different ($p < .05$) from 2018.

NOTE: Black includes African American and Hispanic includes Latino. Race categories exclude Hispanic origin. SD includes students identified as having either an Individualized Education Program or protection under Section 504 of the Rehabilitation Act of 1973. The results for students with disabilities and English language learners are based on students who were assessed and cannot be generalized to the total population of such students.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2014 and 2018 Technology and Engineering Literacy (TEL) Assessments.

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Average scores of eighth-grade students assessed in NAEP technology and engineering literacy (TEL), by various student groups and TEL content areas: 2014 and 2018

Characteristic	TEL content areas					
	Technology and Society		Design and Systems		Information and Communication Technology	
	2014	2018	2014	2018	2014	2018
All students	150 *	152	150 *	153	150 *	153
Race/ethnicity						
White	160 *	163	161	164	159 *	162
Black	129 *	132	127	131	130	133
Hispanic	138	139	138	141	138	140
Asian/Pacific Islander	157 *	166	157 *	167	162 *	172
Asian	158 *	167	158 *	168	163 *	172
Native Hawaiian/Other Pacific Islander	141	‡	147	‡	137	‡
American Indian/Alaska Native	147	135	148	135	147	131
Two or More Races	156	157	154	156	152	157
Gender						
Male	149	151	150	152	147	149
Female	151 *	154	150 *	154	153 *	156
Eligibility for National School Lunch Program						
Eligible	136 *	138	136 *	139	135 *	139
Not eligible	163	164	163	165	163	164
Information not available	164	166	162	166	164	166
Highest level of parental education						
Did not finish high school	133 *	138	135	138	132 *	140
Graduated from high school	138	138	137	139	137	138
Some education after high school	152	151	151	152	152	152
Graduated from college	159 *	163	159 *	163	159 *	163
Unknown	129	130	131	134	130	131
Type of school						
Public	149 *	151	149 *	151	149 *	151
Private: Catholic	164	166	160	167	164	168
Charter school						
Charter school	146	149	145	149	146	150
Public, noncharter	149 *	151	149	152	149 *	152
School location						
City	145	148	144	148	145	148
Suburb	154	156	153	156	154	157
Town	148	153	151	156	148	153
Rural	151	153	153	153	151	152
Region of the country						
Northeast	155	154	154	155	155	155
Midwest	153	157	154	158	154	158
South	147	150	147	150	147	149
West	148	152	148	152	147 *	152
Status as students with disabilities (SD)						
SD	119	120	117	120	115	117
Not SD	154 *	157	154 *	158	155 *	158
Status as English language learners (ELL)						
ELL	110	109	111	106	107	106
Not ELL	152 *	155	152 *	156	152 *	156

‡ Reporting standards not met.

* Significantly different ($p < .05$) from 2018.

NOTE: Black includes African American and Hispanic includes Latino. Race categories exclude Hispanic origin. SD includes students identified as having either an Individualized Education Program or protection under Section 504 of the Rehabilitation Act of 1973. The results for students with disabilities and English language learners are based on students who were assessed and cannot be generalized to the total population of such students.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2014 and 2018 Technology and Engineering Literacy (TEL) Assessments.

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Average scores of eighth-grade students assessed in NAEP technology and engineering literacy (TEL), by various student groups and TEL practices: 2014 and 2018

Characteristic	TEL practices					
	Communicating and Collaborating		Developing Solutions and Achieving Goals		Understanding Technological Principles	
	2014	2018	2014	2018	2014	2018
All students	150 *	153	150 *	152	150 *	152
Race/ethnicity						
White	160 *	163	160 *	163	160	163
Black	129 *	134	128	131	129 *	134
Hispanic	139	140	138	139	138	140
Asian/Pacific Islander	158 *	170	158 *	169	160	166
Asian	159 *	170	160 *	170	161	167
Native Hawaiian/Other Pacific Islander	144	‡	139	‡	145	‡
American Indian/Alaska Native	152 *	136	146	133	149	134
Two or More Races	155	159	154	156	155	155
Gender						
Male	147	149	149	150	149	151
Female	153 *	157	151 *	155	151 *	154
Eligibility for National School Lunch Program						
Eligible	136 *	139	135 *	138	135 *	139
Not eligible	162	164	163	165	163	164
Information not available	164	168	163	166	165	164
Highest level of parental education						
Did not finish high school	135	139	132 *	138	132 *	137
Graduated from high school	138	140	137	138	138	138
Some education after high school	153	151	152	152	151	152
Graduated from college	159 *	163	159 *	163	159 *	163
Unknown	130	130	130	131	130	131
Type of school						
Public	149 *	151	149 *	151	149 *	151
Private: Catholic	164	169	163	167	164	167
Charter school						
Charter school	147	150	146	148	145	153
Public, noncharter	149 *	152	149 *	151	149	151
School location						
City	145 *	149	145	147	145	148
Suburb	154	157	154	156	154	157
Town	149	152	149	154	147	152
Rural	151	152	152	153	152	151
Region of the country						
Northeast	156	155	155	155	154	154
Midwest	153 *	158	154	157	153	157
South	147	150	147	149	148	150
West	148 *	153	148	152	148	151
Status as students with disabilities (SD)						
SD	117	120	117	118	118	120
Not SD	154 *	158	154 *	157	154 *	157
Status as English language learners (ELL)						
ELL	108	106	108	106	111	109
Not ELL	152 *	156	152 *	155	152 *	155

‡ Reporting standards not met.

* Significantly different ($p < .05$) from 2018.

NOTE: Black includes African American and Hispanic includes Latino. Race categories exclude Hispanic origin. SD includes students identified as having either an Individualized Education Program or protection under Section 504 of the Rehabilitation Act of 1973. The results for students with disabilities and English language learners are based on students who were assessed and cannot be generalized to the total population of such students.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2014 and 2018 Technology and Engineering Literacy (TEL) Assessments.

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Achievement level results of eighth-grade students assessed in NAEP technology and engineering literacy (TEL), by various student groups: 2014 and 2018

Characteristic	Percentage of students							
	Below NAEP		At or above NAEP		At or above NAEP		At NAEP	
	<i>Basic</i>		<i>Basic</i>		<i>Proficient</i>		<i>Advanced</i>	
	2014	2018	2014	2018	2014	2018	2014	2018
All students	17	16	83	84	43 *	46	3 *	5
Race/ethnicity								
White	9	8	91	92	56	59	5 *	7
Black	35	32	65	68	18 *	23	#	1
Hispanic	24	24	76	76	28	31	1	2
Asian/Pacific Islander	11	8	89	92	54 *	65	7 *	13
Asian	11	8	89	92	56 *	66	7 *	13
Native Hawaiian/Other Pacific Islander	18	‡	82	‡	30	‡	#	‡
American Indian/Alaska Native	20	33	80	67	42	29	2	2
Two or More Races	12	13	88	87	45	53	5	5
Gender								
Male	18	18	82	82	42	44	3 *	4
Female	15	14	85	86	45 *	49	3 *	5
Eligibility for National School Lunch Program								
Eligible	27	26	73	74	25 *	30	1 *	1
Not eligible	7	8	93	92	59	60	6 *	8
Information not available	8	7	92	93	60	63	7	8
Highest level of parental education								
Did not finish high school	28	24	72	76	20 *	29	#	1
Graduated from high school	26	26	74	74	27	29	1	1
Some education after high school	11	14	89	86	44	44	2	3
Graduated from college	11	9	89	91	55 *	59	5 *	7
Unknown	33	34	67	66	20	22	#	1
Type of school								
Public	17	17	83	83	42 *	45	3 *	4
Private: Catholic	6	5	94	95	60	64	5	7
Charter school								
Charter school	18	18	82	82	37	42	3	4
Public, noncharter	17	17	83	83	42 *	45	3 *	4
School location								
City	22	21	78	79	37	42	3 *	4
Suburb	15	13	85	87	48	51	5	6
Town	16	14	84	86	42	46	2	4
Rural	14	15	86	85	45	45	3	4
Region of the country								
Northeast	14	15	86	85	50	49	5	6
Midwest	13	13	87	87	48	52	3	6
South	19	18	81	82	40	43	3	4
West	18	16	82	84	40	45	3	4
Status as students with disabilities (SD)								
SD	51	48	49	52	13	13	1	1
Not SD	12	11	88	89	47 *	51	4 *	5
Status as English language learners (ELL)								
ELL	59	61	41	39	5	5	#	#
Not ELL	14	13	86	87	45 *	49	4 *	5

Rounds to zero.

‡ Reporting standards not met.

* Significantly different ($p < .05$) from 2018.

NOTE: Black includes African American and Hispanic includes Latino. Race categories exclude Hispanic origin. SD includes students identified as having either an Individualized Education Program or protection under Section 504 of the Rehabilitation Act of 1973. The results for students with disabilities and English language learners are based on students who were assessed and cannot be generalized to the total population of such students. Detail may not sum to totals because of rounding.

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Percentage of eighth-grade students who completely/correctly finished the steps in the Andromeda task in NAEP technology and engineering literacy (TEL), by various student groups: 2018

Characteristic	Percentage of students who completely/correctly finished the steps				
	Step 1: Determine which web search result is most informative.	Step 2: Choose suitable image for website and determine which ones can be used legally.	Step 3: Select appropriate reference guide for formatting a citation.	Step 4: Identify correct reference style.	Step 5: Include required information in citation.
All students	69	70	42	51	29
Race/ethnicity					
White	77	77	48	57	32
Black	51	58	32	40	19
Hispanic	61	61	34	44	24
Asian/Pacific Islander	84	80	60	61	42
Asian	85	79	61	62	44
Native Hawaiian/Other Pacific Islander	59	100	35	16	#
American Indian/Alaska Native	52	56	16	44	16
Two or More Races	63	72	34	47	21
Gender					
Male	66	67	37	46	25
Female	73	73	47	57	32
Eligibility for National School Lunch Program					
Eligible	60	61	34	42	20
Not eligible	77	78	49	59	35
Information not available	82	76	55	60	40
Highest level of parental education					
Did not finish high school	70	71	31	46	24
Graduated from high school	63	64	36	44	23
Some education after high school	73	67	47	53	28
Graduated from college	75	76	49	56	34
Unknown	53	56	24	38	14
Type of school					
Public	68	69	41	50	28
Private: Catholic	82	76	61	68	50
Charter school					
Charter school	71	71	49	61	24
Public, noncharter	68	69	41	50	28
School location					
City	65	67	40	51	28
Suburb	72	71	45	52	29
Town	71	71	46	50	30
Rural	70	72	37	52	26
Region of the country					
Northeast	69	70	43	52	29
Midwest	75	70	45	54	32
South	67	71	41	51	25
West	69	69	41	49	30
Status as students with disabilities (SD)					
SD	47	48	21	25	14
Not SD	72	73	45	55	30
Status as English language learners (ELL)					
ELL	38	41	20	25	6
Not ELL	72	72	44	53	30

Rounds to zero.

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SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2018 Technology and Engineering Literacy (TEL) Assessment.

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School and student participation rates at grade 8 in NAEP technology and engineering literacy (TEL), by type of school: 2018

Type of school	School participation			Student participation	
	Student-weighted percent	School-weighted percent	Number of schools participating	Student-weighted percent	Number of students assessed
Nation	86	69	600	93	15,400
Public	89	85	530	93	14,100
Private	58	45	70	93	1,300

NOTE: The national totals for schools include Department of Defense Education Activity (overseas and domestic schools) and Bureau of Indian Education schools, which are not included in either the public or private totals. The national totals for students include students in these schools. The number of schools is rounded to the nearest ten. The number of students is rounded to the nearest hundred.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2018 Technology and Engineering Literacy (TEL) Assessment.

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Percentage of students with disabilities (SD) and/or English language learners (ELL) identified, excluded, and assessed in NAEP technology and engineering literacy (TEL) at grade 8, as a percentage of all students: 2014 and 2018

Student characteristics	2014	2018
SD and/or ELL		
Identified	17	18
Excluded	1	2
Assessed	16	17
Without accommodations	6	6
With accommodations	10	11
SD		
Identified	13	13
Excluded	1	1
Assessed	12	12
Without accommodations	3	3
With accommodations	9	9
ELL		
Identified	5	6
Excluded	#	1
Assessed	5	6
Without accommodations	3	3
With accommodations	2	3

Rounds to zero.

NOTE: Students identified as both SD and ELL were counted only once under the combined SD and/or ELL category, but were counted separately under the SD and ELL categories. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2014 and 2018 Technology and Engineering Literacy (TEL) Assessments.

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Percentage of students identified as students with disabilities (SD) and/or English language learners (ELL) excluded and assessed in NAEP technology and engineering literacy (TEL) at grade 8, as a percentage of identified SD and/or ELL students: 2014 and 2018

Student characteristics	2014	2018
SD and/or ELL		
Excluded	8	8
Assessed	92	92
Without accommodations	33	33
With accommodations	59	59
SD		
Excluded	8	8
Assessed	92	92
Without accommodations	23	23
With accommodations	69	69
ELL		
Excluded	9	9
Assessed	91	91
Without accommodations	54	52
With accommodations	38	39

NOTE: Students identified as both SD and ELL were counted only once under the combined SD and/or ELL category, but were counted separately under the SD and ELL categories. Detail may not sum to totals because of rounding.

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Percentage of eighth-grade students identified as students with disabilities (SD) and/or English language learners (ELL) assessed in NAEP technology and engineering literacy (TEL) with accommodations, by SD/ELL category and type of accommodation: 2018

Type of accommodation	SD and/or ELL	SD	ELL
Bilingual dictionary	1.09	0.12	1.08
Breaks during test	2.71	2.61	0.27
Cueing to stay on task	1.08	1.06	0.07
Directions only presented in Sign Language	—	—	—
Extended time	9.72	8.26	2.24
Hearing impaired version of the test	0.06	0.06	—
Low mobility version of the test	—	—	—
Magnification	0.09	0.09	0.01
Must have an aide present in the testing room	0.22	0.22	0.01
Other	0.16	0.16	#
Preferential seating	—	—	—
Presentation in Sign Language	0.01	0.01	—
Responds orally to a scribe	0.10	0.10	—
Response in Sign Language	0.01	0.01	—
Separate session	0.53	0.51	0.09
Special equipment	0.68	0.67	0.08
Uses template	—	—	—

— Not available.

Percentages less than .005.

NOTE: Students identified as both SD and ELL were counted only once under the combined SD and/or ELL category, but were counted separately under the SD and ELL categories.

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