



APPENDIX TABLE 7-10

Correct answers to factual knowledge questions in physical and biological sciences, by respondent characteristic: 2016

(Percent)

Characteristic	Physical science								Biological science		
	<i>The center of the Earth is very hot. (True)</i>	<i>The continents on which we live have been moving their locations for millions of years and will continue to move in the future. (True)</i>	<i>Does the Earth go around the Sun, or does the Sun go around the Earth? (Earth around Sun)</i>	<i>All radioactivity is man-made. (False)</i>	<i>How long does it take for the Earth to go around the Sun: one day, one month, or one year?<sup>a</sup> (one year)</i>	<i>Electrons are smaller than atoms. (True)</i>	<i>Lasers work by focusing sound waves. (False)</i>	<i>The universe began with a huge explosion.<sup>b</sup> (True)</i>	<i>It is the father's gene that decides whether the baby is a boy or a girl. (True)</i>	<i>Human beings, as we know them today, developed from earlier species of animals.<sup>c</sup> (True)</i>	<i>Antibiotics kill viruses as well as bacteria. (False)</i>
All adults (n = 1,390)	85	81	73	70	51	48	45	39	59	52	51
Sex											
Male (n = 571)	90	86	81	75	61	53	62	46	46	60	45
Female (n = 819)	82	77	67	66	44	44	33	33	68	48	55
Formal education											
Less than high school (n = 169)	72	67	49	52	27	23	30	32	45	44	20



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High school diploma ( <i>n</i> = 415)	84	76	68	63	41	42	42	34	50	47	43
Some college ( <i>n</i> = 388)	88	85	77	73	53	52	50	38	61	50	52
Bachelor's degree ( <i>n</i> = 263)	89	87	83	80	71	59	52	44	71	63	73
Graduate or professional degree ( <i>n</i> = 151)	91	88	87	86	70	61	51	50	71	67	68
Science and mathematics education <sup>d</sup>											
Low ( <i>n</i> = 776)	83	76	66	62	41	39	37	35	55	46	41



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Middle ( <i>n</i> = 262)	90	84	85	78	61	52	53	33	64	51	62
High ( <i>n</i> = 275)	92	92	88	88	80	72	64	57	71	70	72
Family income (quartile) <sup>e</sup>											
Bottom ( <i>n</i> = 336)	87	79	64	60	46	47	43	33	51	52	38
Third ( <i>n</i> = 281)	79	80	70	66	46	43	41	32	56	45	44
Second ( <i>n</i> = 324)	85	78	79	70	51	49	43	37	62	45	56
Top ( <i>n</i> = 318)	93	87	84	82	65	55	57	43	68	66	66
Age (years)											



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18-24 (n = 115)	86	82	78	65	46	56	51	52	45	70	41
25-34 (n = 269)	89	86	82	65	67	54	52	47	58	61	54
35-44 (n = 206)	86	84	72	67	55	47	46	43	65	47	51
45-54 (n = 223)	87	78	76	75	52	51	48	33	65	49	54
55-64 (n = 264)	87	79	71	72	47	43	46	34	63	42	52
65 or older (n = 310)	78	75	60	73	40	39	33	27	53	45	48
Verbal ability <sup>f</sup>											
0-4 (n = 276)	77	73	53	52	31	36	31	38	41	51	25



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5 (n = 256)	87	77	69	65	43	40	39	35	60	47	38
6 (n = 317)	86	81	72	69	49	48	41	29	64	43	48
7 (n = 256)	87	83	81	74	58	50	54	45	58	57	63
8-10 (n = 285)	91	90	89	91	76	65	64	50	70	66	80
Trend factual knowledge of science scale (quartile) <sup>g</sup>											
Bottom (n = 250)	53	46	26	30	2	13	15	19	29	30	13
Third (n = 387)	82	76	58	59	25	35	28	31	52	51	37
Second (n = 437)	96	91	91	82	69	48	49	40	65	53	56
Top (n = 316)	99	98	100	97	97	89	85	60	81	70	90



- <sup>a</sup> Question was asked only of survey respondents who answered correctly that the Earth goes around the Sun. Individuals who responded incorrectly that the Sun goes around the Earth also count as having responded incorrectly to the question on the length of the Earth's revolution around the Sun.
- <sup>b</sup> Question was asked of 457 survey respondents.
- <sup>c</sup> Question was asked of 704 survey respondents.
- <sup>d</sup> For science and mathematics education, "low" equates to five or fewer high school and college science or mathematics courses, "middle" is six through eight courses, and "high" means nine or more courses. Categories do not add to total  $n$  because "don't know" responses and refusals to respond are not shown.
- <sup>e</sup> Categories do not add to total  $n$  because "don't know" responses and refusals to respond are not shown.
- <sup>f</sup> Measure is based on correct responses to a 10-item, multiple-choice test of vocabulary knowledge. Categories represent the number of correct responses.
- <sup>g</sup> See notes to Appendix Table 7-2 for an explanation of the trend factual knowledge of science scale.

**Note(s)**

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"Don't know" responses and refusals to respond count as incorrect.

**Source(s)**

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NORC at the University of Chicago, General Social Survey (2016).

*Science and Engineering Indicators 2018*