

Table 127. Average science scale score, by age and selected student and school characteristics: Selected years, 1970 to 1999

Selected student and school characteristics	1970 ¹	1973	1977	1982	1986	1990	1992	1994	1996	1999
1	2	3	4	5	6	7	8	9	10	11
9-year-olds										
Total	225 (1.2)	220 (1.2)	219.9 (1.2)	220.8 (1.8)	224.3 (1.2)	228.7 (0.8)	230.6 (1.0)	231.0 (1.2)	229.7 (1.2)	229.4 (0.9)
Sex										
Male	228 (1.3)	223 (1.3)	222.1 (1.3)	221.0 (2.3)	227.3 (1.4)	230.3 (1.1)	234.7 (1.2)	232.2 (1.3)	231.5 (1.7)	230.9 (1.3)
Female	223 (1.2)	218 (1.2)	217.6 (1.2)	220.7 (2.0)	221.3 (1.4)	227.1 (1.0)	226.7 (1.0)	230.0 (1.4)	228.0 (1.5)	227.9 (1.1)
Race/ethnicity										
White, non-Hispanic	236 (0.9)	231 (0.9)	229.6 (0.9)	229.0 (1.9)	231.9 (1.2)	237.5 (0.8)	239.1 (1.0)	240.3 (1.3)	239.0 (1.4)	239.6 (0.9)
Black, non-Hispanic	179 (1.9)	177 (1.9)	174.8 (1.8)	187.0 (3.0)	196.2 (1.9)	196.4 (2.0)	200.3 (2.7)	201.4 (1.7)	201.9 (3.0)	198.9 (2.5)
Hispanic	— (—)	— (—)	191.9 (2.7)	189.0 (4.2)	199.4 (3.1)	206.2 (2.2)	204.7 (2.8)	201.0 (2.7)	207.1 (2.8)	206.1 (2.2)
Type of school										
Public	— (—)	— (—)	218.0 (1.4)	219.7 (2.0)	222.6 (1.4)	227.7 (0.9)	229.1 (1.0)	229.5 (1.4)	228.5 (1.3)	228.0 (0.9)
Private	— (—)	— (—)	234.6 (2.2)	231.5 (3.2)	233.0 (2.9)	236.8 (2.4)	240.2 (2.7)	242.2 (2.8)	237.9 (4.1)	238.9 (2.6)
Region										
Northeast	230 (2.9)	222 (2.9)	224.4 (1.6)	221.8 (2.9)	228.2 (3.5)	231.1 (2.4)	234.4 (2.8)	234.6 (2.5)	233.6 (2.6)	237.8 (2.8)
Southeast	206 (1.6)	207 (1.6)	205.1 (2.9)	213.9 (3.6)	218.8 (3.1)	219.9 (1.9)	222.8 (1.7)	227.4 (2.2)	224.1 (3.4)	223.1 (3.2)
Central	233 (3.0)	228 (3.0)	225.2 (2.2)	226.3 (3.5)	227.9 (2.2)	234.2 (1.7)	237.5 (1.8)	236.2 (2.7)	233.7 (2.4)	233.0 (1.8)
West	226 (2.2)	221 (2.2)	220.9 (2.2)	219.9 (4.1)	222.1 (3.2)	229.5 (1.8)	227.4 (2.2)	226.4 (2.7)	228.0 (1.9)	224.3 (1.4)
13-year-olds										
Total	255 (1.1)	250 (1.1)	247.4 (1.1)	250.1 (1.3)	251.4 (1.4)	255.2 (0.9)	258.0 (0.8)	256.8 (1.0)	256.0 (1.0)	255.8 (0.7)
Sex										
Male	257 (1.3)	252 (1.3)	251.1 (1.3)	255.6 (1.5)	256.1 (1.6)	258.5 (1.1)	260.1 (1.2)	259.4 (1.2)	260.5 (1.0)	258.7 (0.9)
Female	253 (1.2)	247 (1.2)	243.7 (1.2)	245.0 (1.3)	246.9 (1.5)	251.8 (1.1)	256.0 (1.0)	254.3 (1.2)	251.7 (1.3)	252.9 (1.0)
Race/ethnicity										
White, non-Hispanic	263 (0.8)	259 (0.8)	256.1 (0.8)	257.3 (1.1)	259.2 (1.4)	264.1 (0.9)	267.1 (1.0)	266.5 (1.0)	265.9 (1.1)	265.8 (0.8)
Black, non-Hispanic	215 (2.4)	205 (2.4)	208.1 (2.4)	217.1 (1.3)	221.6 (2.5)	225.7 (3.1)	224.4 (2.7)	223.9 (4.2)	225.7 (2.1)	226.9 (2.4)
Hispanic	— (—)	— (—)	213.4 (1.9)	225.5 (3.9)	226.1 (3.1)	231.6 (2.6)	237.5 (2.6)	232.1 (2.4)	232.2 (2.5)	227.2 (1.9)
Parents' highest level of education										
Not high school graduate	— (—)	— (—)	223.5 (1.3)	225.3 (1.9)	229.4 (2.7)	232.9 (2.1)	233.8 (2.9)	234.3 (2.5)	229.8 (3.1)	229.3 (2.8)
Graduated high school	— (—)	— (—)	245.3 (1.1)	243.1 (1.3)	244.8 (1.4)	247.3 (1.3)	246.4 (1.4)	247.1 (1.2)	247.6 (1.7)	243.2 (1.4)
Some college	— (—)	— (—)	260.3 (1.3)	258.8 (1.5)	257.8 (1.4)	262.8 (1.2)	265.9 (1.1)	260.4 (2.0)	260.6 (1.4)	260.9 (1.3)
Graduated college	— (—)	— (—)	266.4 (1.0)	263.5 (1.5)	264.4 (1.9)	267.5 (1.1)	269.2 (1.0)	268.8 (1.3)	266.4 (1.2)	267.7 (1.0)
Type of school										
Public	— (—)	— (—)	245.2 (1.2)	248.5 (1.4)	250.9 (1.4)	253.6 (1.1)	257.2 (1.0)	255.4 (1.1)	254.5 (1.1)	254.0 (1.1)
Private	— (—)	— (—)	267.7 (2.1)	263.7 (3.2)	263.1 (6.4)	269.0 (1.8)	264.5 (2.4)	267.6 (2.6)	267.8 (5.0)	269.3 (2.7)
Region										
Northeast	261 (2.2)	256 (2.2)	255.2 (2.3)	254.1 (2.1)	257.6 (3.1)	256.8 (2.7)	256.8 (2.2)	262.7 (1.7)	254.7 (3.0)	257.6 (2.4)
Southeast	239 (2.4)	237 (2.4)	235.1 (1.8)	238.7 (2.3)	247.1 (2.2)	251.3 (1.9)	254.2 (2.8)	252.6 (2.6)	250.8 (2.7)	251.0 (2.2)
Central	262 (1.8)	256 (1.8)	253.8 (1.8)	253.8 (2.6)	249.4 (5.3)	260.4 (2.8)	262.5 (2.1)	261.1 (3.5)	265.7 (1.8)	259.9 (1.9)
West	255 (1.8)	248 (1.8)	243.0 (2.3)	252.4 (2.8)	252.3 (2.7)	252.6 (2.1)	258.0 (1.6)	252.2 (2.1)	253.6 (1.8)	254.2 (1.5)
17-year-olds										
Total	305 (1.0)	296 (1.0)	289.5 (1.0)	283.3 (1.2)	288.5 (1.4)	290.4 (1.1)	294.1 (1.3)	294.0 (1.6)	295.7 (1.2)	295.3 (1.3)
Sex										
Male	314 (1.2)	304 (1.2)	297.0 (1.2)	291.9 (1.4)	294.9 (1.9)	295.6 (1.3)	299.1 (1.7)	299.5 (2.0)	299.7 (1.6)	300.4 (1.6)
Female	297 (1.1)	288 (1.1)	282.2 (1.1)	275.2 (1.3)	282.3 (1.5)	285.4 (1.6)	289.0 (1.5)	288.9 (1.7)	291.8 (1.4)	290.6 (1.5)
Race/ethnicity										
White, non-Hispanic	312 (0.8)	304 (0.8)	297.7 (0.7)	293.1 (1.0)	297.5 (1.7)	300.9 (1.1)	304.2 (1.3)	306.0 (1.5)	306.8 (1.2)	306.2 (1.3)
Black, non-Hispanic	258 (1.5)	250 (1.5)	240.2 (1.5)	234.7 (1.7)	252.8 (2.9)	253.0 (4.5)	256.2 (3.2)	256.8 (3.1)	260.3 (2.4)	254.4 (2.9)
Hispanic	— (—)	— (—)	262.3 (2.2)	248.7 (2.3)	259.3 (3.8)	261.5 (4.4)	270.2 (5.6)	261.4 (6.7)	269.3 (3.3)	276.0 (4.2)
Parents' highest level of education										
Not high school graduate	— (—)	— (—)	265.3 (1.3)	258.5 (2.4)	257.5 (3.1)	261.4 (2.8)	262.0 (3.8)	255.8 (4.2)	259.3 (4.0)	264.0 (3.7)
Graduated high school	— (—)	— (—)	284.4 (0.8)	275.2 (1.6)	277.0 (2.0)	276.3 (1.4)	280.2 (2.4)	279.2 (1.7)	282.2 (2.5)	280.8 (2.0)
Some college	— (—)	— (—)	295.6 (1.1)	290.1 (1.7)	295.1 (2.5)	296.5 (1.6)	295.9 (1.7)	294.8 (1.9)	297.1 (1.9)	296.5 (2.1)
Graduated college	— (—)	— (—)	309.3 (1.0)	300.2 (1.7)	303.8 (2.1)	305.5 (1.7)	308.3 (1.3)	310.6 (1.6)	307.8 (1.5)	307.2 (1.5)
Type of school										
Public	— (—)	— (—)	288.2 (1.0)	282.3 (1.1)	287.1 (1.6)	289.0 (1.1)	292.2 (1.3)	291.7 (1.5)	294.9 (1.2)	293.4 (1.3)
Private	— (—)	— (—)	308.4 (2.4)	292.0 (2.9)	321.3 (10.1)	307.8 (6.6)	311.7 (3.7)	310.4 (4.8)	303.6 (5.5)	311.4 (4.9)
Region										
Northeast	308 (2.5)	298 (2.5)	296.3 (2.2)	284.4 (2.0)	292.2 (4.3)	292.6 (3.2)	300.1 (2.4)	298.9 (4.2)	296.0 (3.3)	300.6 (3.2)
Southeast	287 (2.3)	283 (2.3)	276.4 (1.9)	276.3 (2.7)	283.5 (2.0)	283.6 (2.4)	283.0 (2.5)	287.8 (3.8)	287.8 (3.1)	286.1 (2.7)
Central	308 (1.9)	300 (1.9)	294.0 (1.5)	289.3 (2.6)	294.4 (2.3)	299.6 (3.0)	304.2 (2.7)	297.8 (2.7)	307.3 (2.6)	296.2 (2.4)
West	308 (1.7)	295 (1.7)	286.5 (1.5)	280.9 (2.7)	283.2 (3.8)	285.8 (2.3)	290.4 (3.8)	291.8 (4.1)	291.7 (2.4)	297.8 (2.7)

—Not available.

¹Data for 17-year-olds are for 1969.

NOTE: Excludes persons not enrolled in school and those who were unable to be tested due to limited proficiency in English or due to a disability. These test scores are from the National Assessment of Educational Progress (NAEP). A score of 150 implies knowledge of some general scientific facts of the type that could be learned from everyday experiences. A score of 200 implies development of some understanding of simple scientific principles, particularly in the life sciences. A score of 250 implies an ability to interpret data from simple tables and make inferences about the outcomes of experimental procedures. They exhibit knowledge and understanding of the life sciences and also demonstrate some knowledge of basic information from the physical sciences. A score

of 300 implies an ability to evaluate the appropriateness of the design of an experiment and have the skill to apply their scientific knowledge in interpreting information from text and graphs. These students also exhibit a growing understanding of principles from the physical sciences. A score of 350 implies an ability to infer relationships and draw conclusions using detailed scientific knowledge from the physical sciences, particularly chemistry. They also can apply basic principles of genetics and interpret the societal implications of research in this field. Scale ranges from 0 to 500. Totals include other racial/ethnic groups not shown separately. Standard errors appear in parentheses.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, *NAEP Trends in Academic Progress*, various years, by Educational Testing Service. (This table was prepared November 2001.)