

TABLE 9.2

FITNESSGRAM Standards for Healthy Fitness Zone

GIRLS												
Age	VO ₂ max (ml · kg ⁻¹ · min ⁻¹)	20-meter PACER (Enter # laps in software)	15-meter PACER (Use conversion chart; enter in software)†	One-mile run (min:sec)	Walk test (VO ₂ max)	Percent fat		Body mass index				
						Participation in run. Lap count standards not recommended.	Completion of distance. Time stan- dards not re- commended.		32	17		
5						32	17	21	16.2			
6						32	17	21	16.2			
7						32	17	22	16.2			
8						32	17	22	16.2			
9						32	13	23	13.5			
10	39	47	7	41	9	54	12:30	9:30	32	13	23.5	13.7
11	38	46	15	41	19	54	12:00	9:00	32	13	24	14.0
12	37	45	15	41	19	54	12:00	9:00	32	13	24.5	14.5
13	36	44	23	51	30	67	11:30	9:00	32	13	24.5	14.9
14	35	43	23	51	30	67	11:00	8:30	32	13	25	15.4
15	35	43	32	51	42	67	10:30	8:00	32	13	25	16.0
16	35	43	32	61	42	80	10:00	8:00	35	43	25	16.4
17	35	43	41	61	54	80	10:00	8:00	35	43	26	16.8
17+	35	43	41	72	54	94	10:00	8:00	35	43	27.3	17.2

Age	Curl-up (no. completed)	Trunk lift (inches)	90° push-up (no. completed)	Modified pull-up (no. completed)	Flexed arm hang (seconds)		Back-saver sit and reach* (inches)	Shoulder stretch	
					2	7			
5	2	10	6	12	3	8	2	8	9
6	2	10	6	12	3	8	2	8	9
7	4	14	6	12	4	10	3	8	9
8	6	20	6	12	5	13	4	10	9
9	9	22	6	12	6	15	4	10	9
10	12	26	9	12	7	15	4	10	9
11	15	29	9	12	7	15	4	13	10
12	18	32	9	12	7	15	4	13	10
13	18	32	9	12	7	15	4	13	10
14	18	32	9	12	7	15	4	13	10
15	18	35	9	12	7	15	4	13	12
16	18	35	9	12	7	15	4	13	12
17	18	35	9	12	7	15	4	13	12
17+	18	35	9	12	7	15	4	13	12

Number on left is lower end of HFZ; number on right is upper end of HFZ.

*Test scored Pass/Fail; must reach this distance to pass.

†Conversion chart on page 94.

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TABLE 9.1 FITNESSGRAM Standards for Healthy Fitness Zone

BOYS																
Age	VO ₂ max (ml · kg ⁻¹ · min ⁻¹)	20-meter PACER (Enter # laps in software)	15-meter PACER (Use conversion chart; enter in software)†	One-mile run (min:sec)	Walk test (VO ₂ max)	Percent fat		Body mass index								
						5	10									
5	Participation in run. Lap count standards not recommended.	Participation in run. Lap count standards not recommended.	Participation in run. Lap count standards not recommended.	Completion of distance.	Time standards not recommended.	25	10	20	14.7							
6						25	10	20	14.7							
7						25	10	20	14.9							
8						25	10	20	15.1							
9						25	7	20	13.7							
10						42	23	61	30	80	11:30	9:00	25	7	21	14.0
11						42	23	72	30	94	11:00	8:30	25	7	21	14.3
12						42	32	72	42	94	10:30	8:00	25	7	22	14.6
13						42	41	83	54	108	10:00	7:30	25	7	23	15.1
14	42	52	41	83	108	9:30	7:00	25	7	24.5	15.6					
15	42	52	51	94	123	9:00	7:00	25	7	25	16.2					
16	42	52	61	94	123	8:30	7:00	25	7	26.5	16.6					
17	42	52	61	106	138	8:30	7:00	25	7	27	17.3					
17+	42	52	72	106	138	8:30	7:00	25	7	27.8	17.8					

Age	Curl-up (no. completed)	Trunk lift (inches)	90° push-up (no. completed)	Modified pull-up (no. completed)	Flexed arm hang (seconds)		Back-saver sit (inches)	Shoulder stretch			
					2	7					
5	2	10	6	12	3	8	2	7	2	8	Healthy Fitness Zone = touching fingertips together behind the back on both the right and left sides.
6	2	10	6	12	3	8	2	7	2	8	
7	4	14	6	12	4	10	3	9	3	8	
8	6	20	6	12	5	13	4	11	3	10	
9	9	24	6	12	6	15	5	11	4	10	
10	12	24	9	12	7	20	5	15	4	10	
11	15	28	9	12	8	20	6	17	6	13	
12	18	36	9	12	10	20	7	20	10	15	
13	21	40	9	12	12	25	8	22	12	17	
14	24	45	9	12	14	30	9	25	15	20	
15	24	47	9	12	16	35	10	27	15	20	
16	24	47	9	12	18	35	12	30	15	20	
17	24	47	9	12	18	35	14	30	15	20	
17+	24	47	9	12	18	35	14	30	15	20	

Number on left is lower end of HFZ; number on right is upper end of HFZ.

*Test scored Pass/Fail; must reach this distance to pass.

†Conversion chart on page 94.

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TABLE B.2 FITNESSGRAM Body Composition Conversion Chart

GIRLS

Total MM	% Fat	Total MM	% Fat	Total MM	% Fat	Total MM	% Fat	Total MM	% Fat	Total MM	% Fat
1.0	5.7	16.0	14.9	31.0	24.0	46.0	33.2	61.0	42.3		
1.5	6.0	16.5	15.2	31.5	24.3	46.5	33.5	61.5	42.6		
2.0	6.3	17.0	15.5	32.0	24.6	47.0	33.8	62.0	42.9		
2.5	6.6	17.5	15.8	32.5	24.9	47.5	34.1	62.5	43.2		
3.0	6.9	18.0	16.1	33.0	25.2	48.0	34.4	63.0	43.5		
3.5	7.2	18.5	16.4	33.5	25.5	48.5	34.7	63.5	43.8		
4.0	7.5	19.0	16.7	34.0	25.8	49.0	35.0	64.0	44.1		
4.5	7.8	19.5	17.0	34.5	26.1	49.5	35.3	64.5	44.4		
5.0	8.2	20.0	17.3	35.0	26.5	50.0	35.6	65.0	44.8		
5.5	8.5	20.5	17.6	35.5	26.8	50.5	35.9	65.5	45.1		
6.0	8.8	21.0	17.9	36.0	27.1	51.0	36.2	66.0	45.4		
6.5	9.1	21.5	18.2	36.5	27.4	51.5	36.5	66.5	45.7		
7.0	9.4	22.0	18.5	37.0	27.7	52.0	36.8	67.0	46.0		
7.5	9.7	22.5	18.8	37.5	28.0	52.5	37.1	67.5	46.3		
8.0	10.0	23.0	19.1	38.0	28.3	53.0	37.4	68.0	46.6		
8.5	10.3	23.5	19.4	38.5	28.6	53.5	37.7	68.5	46.9		
9.0	10.6	24.0	19.7	39.0	28.9	54.0	38.0	69.0	47.2		
9.5	10.9	24.5	20.0	39.5	29.2	54.5	38.3	69.5	47.5		
10.0	11.2	25.0	20.4	40.0	29.5	55.0	38.7	70.0	47.8		
10.5	11.5	25.5	20.7	40.5	29.8	55.5	39.0	70.5	48.1		
11.0	11.8	26.0	21.0	41.0	30.1	56.0	39.3	71.0	48.4		
11.5	12.1	26.5	21.3	41.5	30.4	56.5	39.6	71.5	48.7		
12.0	12.4	27.0	21.6	42.0	30.7	57.0	39.9	72.0	49.0		
12.5	12.7	27.5	21.9	42.5	31.0	57.5	40.2	72.5	49.3		
13.0	13.0	28.0	22.2	43.0	31.3	58.0	40.5	73.0	49.6		
13.5	13.3	28.5	22.5	43.5	31.6	58.5	40.8	73.5	49.9		
14.0	13.6	29.0	22.8	44.0	31.9	59.0	41.1	74.0	50.2		
14.5	13.9	29.5	23.1	44.5	32.2	59.5	41.4	74.5	50.5		
15.0	14.3	30.0	23.4	45.0	32.6	60.0	41.7	75.0	50.9		
15.5	14.6	30.5	23.7	45.5	32.9	60.5	42.0	75.5	51.2		

From: FITNESSGRAM/ACTIVITYGRAM Test Administration Manual, Fourth Edition by The Cooper Institute, 2005, Champaign, IL: Human Kinetics

TABLE B.1 FITNESSGRAM Body Composition Conversion Chart

BOYS									
Total MM	% Fat	Total MM	% Fat	Total MM	% Fat	Total MM	% Fat	Total MM	% Fat
1.0	1.7	16.0	12.8	31.0	23.8	46.0	34.8	61.0	45.8
1.5	2.1	16.5	13.1	31.5	24.2	46.5	35.2	61.5	46.2
2.0	2.5	17.0	13.5	32.0	24.5	47.0	35.5	62.0	46.6
2.5	2.8	17.5	13.9	32.5	24.9	47.5	35.9	62.5	46.9
3.0	3.2	18.0	14.2	33.0	25.3	48.0	36.3	63.0	47.3
3.5	3.6	18.5	14.6	33.5	25.6	48.5	36.6	63.5	47.7
4.0	3.9	19.0	15.0	34.0	26.0	49.0	37.0	64.0	48.0
4.5	4.3	19.5	15.3	34.5	26.4	49.5	37.4	64.5	48.4
5.0	4.7	20.0	15.7	35.0	26.7	50.0	37.8	65.0	48.8
5.5	5.0	20.5	16.1	35.5	27.1	50.5	38.1	65.5	49.1
6.0	5.4	21.0	16.4	36.0	27.5	51.0	38.5	66.0	49.5
6.5	5.8	21.5	16.8	36.5	27.8	51.5	38.9	66.5	49.9
7.0	6.1	22.0	17.2	37.0	28.2	52.0	39.2	67.0	50.2
7.5	6.5	22.5	17.5	37.5	28.6	52.5	39.6	67.5	50.6
8.0	6.9	23.0	17.9	38.0	28.9	53.0	40.0	68.0	51.0
8.5	7.2	23.5	18.3	38.5	29.3	53.5	40.3	68.5	51.3
9.0	7.6	24.0	18.6	39.0	29.7	54.0	40.7	69.0	51.7
9.5	8.0	24.5	19.0	39.5	30.0	54.5	41.1	69.5	52.1
10.0	8.4	25.0	19.4	40.0	30.4	55.0	41.4	70.0	52.5
10.5	8.7	25.5	19.7	40.5	30.8	55.5	41.8	70.5	52.8
11.0	9.1	26.0	20.1	41.0	31.1	56.0	42.2	71.0	53.2
11.5	9.5	26.5	20.5	41.5	31.5	56.5	42.5	71.5	53.6
12.0	9.8	27.0	20.8	42.0	31.9	57.0	42.9	72.0	53.9
12.5	10.2	27.5	21.2	42.5	32.2	57.5	43.3	72.5	54.3
13.0	10.6	28.0	21.6	43.0	32.6	58.0	43.6	73.0	54.7
13.5	10.9	28.5	21.9	43.5	33.0	58.5	44.0	73.5	55.0
14.0	11.3	29.0	22.3	44.0	33.3	59.0	44.4	74.0	55.4
14.5	11.7	29.5	22.7	44.5	33.7	59.5	44.7	74.5	55.8
15.0	12.0	30.0	23.1	45.0	34.1	60.0	45.1	75.0	56.1
15.5	12.4	30.5	23.4	45.5	34.4	60.5	45.5	75.5	56.5

From FITNESSGRAM/ACTIVITYGRAM Test Administration Manual, Fourth Edition by The Cooper Institute, 2005, Champaign, IL: Human Kinetics.