

# FITNESSGRAM Scorecard (for Males 14-17+, and Adults 18+) Females see last pages

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Age: \_\_\_\_\_

## Weight Health

Weight: \_\_\_\_\_ lbs

Height: \_\_\_\_\_ inches

Inches<sup>2</sup>: \_\_\_\_\_

BMI: \_\_\_\_\_ = (lbs x 703) / inches<sup>2</sup>

Skinfold Measures See: <http://www.topendsports.com/testing/bodyfat-percent.htm>  
Tricep: \_\_\_\_\_ (landmark: <http://www.topendsports.com/testing/skinfold-tricep.htm>)

Subscapular: \_\_\_\_\_ (landmark: <http://www.topendsports.com/testing/skinfold-subscapular.htm>)

Supraspinale: \_\_\_\_\_ (landmark: <http://www.topendsports.com/testing/skinfold-supraspinale.htm>)

Abdominal: \_\_\_\_\_ (landmark: <http://www.topendsports.com/testing/skinfold-abdominal.htm>)

Thigh: \_\_\_\_\_ (landmark: <http://www.topendsports.com/testing/skinfold-front-thigh.htm>)

Calf: \_\_\_\_\_ (landmark: <http://www.topendsports.com/testing/skinfold-medial-calf.htm>)

TOTAL = \_\_\_\_\_ **Tricep + Calf** = \_\_\_\_\_ (boys 14 to 17+ only)

Yuhasz Equation for Males: \_\_\_\_\_ = (0.1051 x [tricep + subscap + supra + ab + thigh + calf] ) + 2.585

% Body Fat: \_\_\_\_\_ = (0.1051 x \_\_\_\_\_ ) + 2.585

## Aerobic Fitness

Warm-up: Achilles tendon stretch, arm rotators (2 min.); stationary bike (6 min.)

One-mile Run: \_\_\_\_\_ minutes

ml/kg/min: \_\_\_\_\_ = .21(age) - .84(BMI) - 8.41(run min) + .34(run min<sup>2</sup>) + 108.94

run min<sup>2</sup> = (\_\_\_\_\_)

= .21 (\_\_\_\_) - .84(\_\_\_\_) - 8.41(\_\_\_\_) + .34(\_\_\_\_) + 108.94

VO<sub>2</sub>max: \_\_\_\_\_ = (\_\_\_\_) - (\_\_\_\_) - (\_\_\_\_) + (\_\_\_\_) + 108.94

## Muscular Strength, Endurance, and Flexibility

Curl-ups: \_\_\_\_\_ no. completed (75 max.)

Trunk Lifts: \_\_\_\_\_ inches

Push-ups: \_\_\_\_\_ no. completed

Sit-and-reach: \_\_\_\_\_ left leg up

\_\_\_\_\_ right leg up

Pull-ups: \_\_\_\_\_ no. completed

Shoulder Stretch: \_\_\_\_\_ right side touch (yes/no)

\_\_\_\_\_ left side touch (yes/no)

Flexed Arm Hang: \_\_\_\_\_ seconds

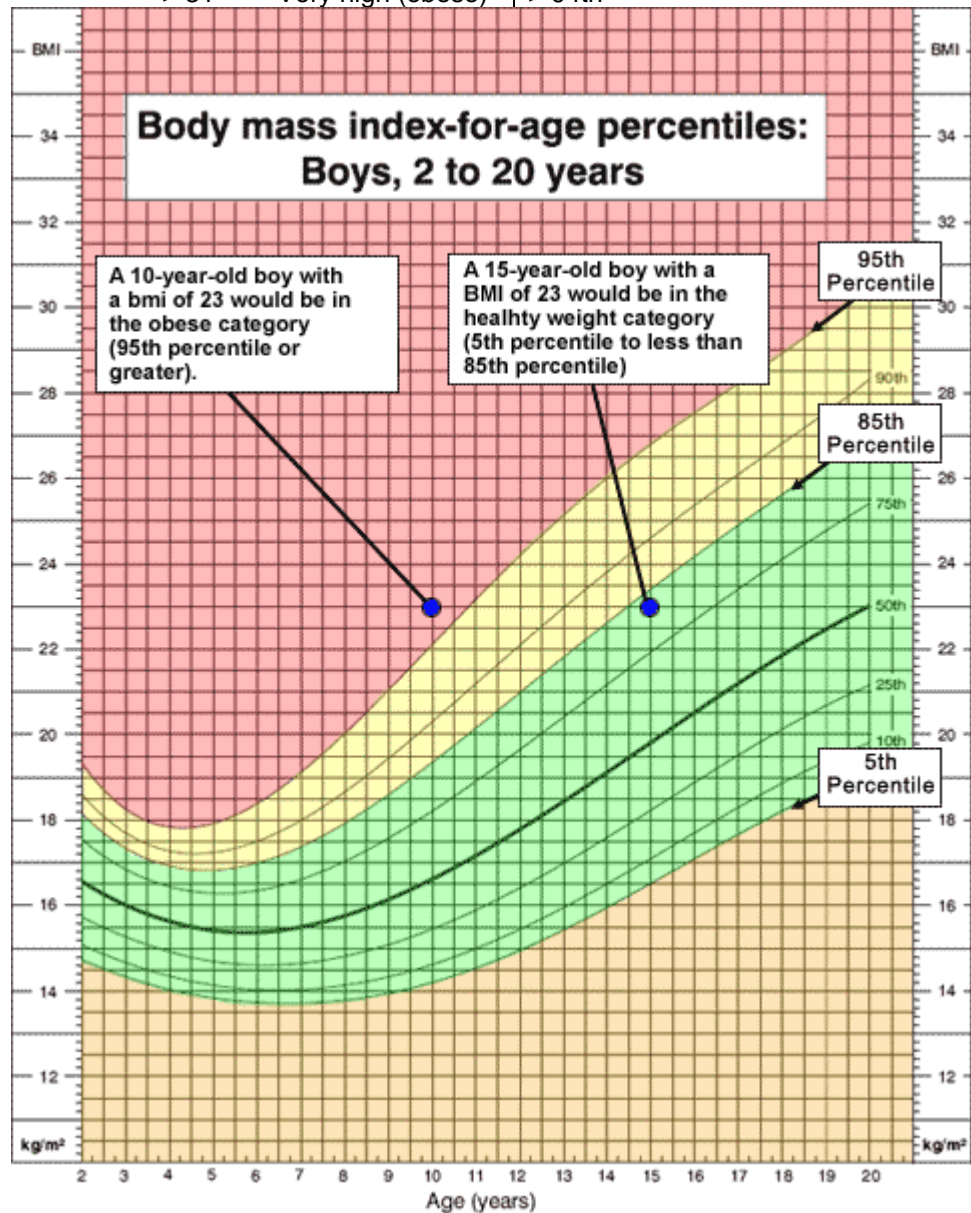
# FITNESSGRAM Information

## BMI

Zone Score	
Age	BMI
14	24.5 to 15.6
15	25 to 16.2
16	26.5 to 16.6
17	27 to 17.3
17+	27.8 to 17.8

### BMI Ranges for Youth

Age	BMI	Rating	Percentiles
9-17+	< 7	Very low	< 5th
	7 to 9.9	Low	5th to 84th
	10 to 20	Optimal	
	20.1 to 25	Moderately high	
	25.1 to 31	High (overweight)	85th to 94th
	> 31	Very high (obese)	> 94th



### BMI Ranges for Adults

Age	BMI	Risk Rating
19+	< 18.5	Extreme
	18.5 to 24.9	Minimal
	25.0 to 27.0	Moderate
	27.1 to 29.9	Medium
	30.0 to 34.9	High
	> 35.0	Extreme

**Percent Body Fat**

Zone Score	
Age	Percent
14 to 17+	7 to 10%

\* Boys 6 to 18 with body fat of 25% or higher are at risk of heart disease and high blood pressure.

**Body Composition Chart (FITNESSGRAM)**

Age	Triceps + Calf MM	Percent Fat	Triceps + Calf MM	Percent Fat	Triceps + Calf MM	Percent Fat
14 to 17+	1.0	1.7	26.0	20.1	51.0	38.5
	1.5	2.1	26.5	20.5	51.5	38.9
	2.0	2.5	27.0	20.8	52.0	39.2
	2.5	2.8	27.5	21.2	52.5	39.6
	3.0	3.2	28.0	21.6	53.0	40.0
	3.5	3.6	28.5	21.9	53.5	40.3
	4.0	3.9	29.0	22.3	54.0	40.7
	4.5	4.3	29.5	22.7	54.5	41.1
	5.0	4.7	30.0	23.1	55.0	41.4
	5.5	5.0	30.5	23.4	55.5	41.8
	6.0	5.4	31.0	23.8	56.0	42.2
	6.5	5.8	31.5	24.2	56.5	42.5
	7.0	6.1	32.0	24.5	57.0	42.9
	7.5	6.5	32.5	24.9	57.5	43.3
	8.0	6.9	33.0	25.3	58.0	43.6
	8.5	7.2	33.5	25.6	58.5	44.0
	9.0	7.6	34.0	26.0	59.0	44.4
	9.5	8.0	34.5	26.4	59.5	44.7
	10.0	8.4	35.0	26.7	60.0	45.1
	10.5	8.7	35.5	27.1	60.5	45.5
	11.0	9.1	36.0	27.5	61.0	45.8
	11.5	9.5	36.5	27.8	61.5	46.2
	12.0	9.8	37.0	28.2	62.0	46.6
	12.5	10.2	37.5	28.6	62.5	46.9
	13.0	10.6	38.0	28.9	63.0	47.3
	13.5	10.9	38.5	29.3	63.5	47.7
	14.0	11.3	39.0	29.7	64.0	48.0
	14.5	11.7	39.5	30.0	64.5	48.4
	15.0	12.0	40.0	30.4	65.0	48.8
	15.5	12.4	40.5	30.8	65.5	49.1
	16.0	12.8	41.0	31.1	66.0	49.5
	16.5	13.1	41.5	31.5	66.5	49.9
	17.0	13.5	42.0	31.9	67.0	50.2
	17.5	13.9	42.5	32.2	67.5	50.6
	18.0	14.2	43.0	32.6	68.0	51.0
	18.5	14.6	43.5	33.0	68.5	51.3
	19.0	15.0	44.0	33.3	69.0	51.7
	19.5	15.3	44.5	33.7	69.5	52.1
	20.0	15.7	45.0	34.1	70.0	52.5
	20.5	16.1	45.5	34.4	70.5	52.8
	21.0	16.4	46.0	34.8	71.0	53.2
	21.5	16.8	46.5	35.2	71.5	53.6
	22.0	17.2	47.0	35.5	72.0	53.9
	22.5	17.5	47.5	35.9	72.5	54.3
	23.0	17.9	48.0	36.3	73.0	54.7
	23.5	18.3	48.5	36.6	73.5	55.0
	24.0	18.6	49.0	37.0	74.0	55.4
	24.5	19.0	49.5	37.4	74.5	55.8
	25.0	19.4	50.0	37.8	75.0	56.1
	25.5	19.7	50.5	38.1	75.5	56.5

**Average Body Fat**

Age	Percent
13 to 19	15%
20 to 30	9 to 15%
30 to 50	11 to 17%
50+	12 to 19%

**Percent Body Fat (Adults)****General Body Fat Percentages for Adult Males**

(American Council of Exercise)

Age	Percent Fat	Classification
20+	2 – 4%	Essential fat
	6 – 13%	Athletes
	14 – 17%	Fitness
	18 – 25%	Acceptable
	25% +	Obese

**Body Fat Measurements for Adult Males (Accu-Measure)**

Age	Abdominal MM	Classification
18 – 20	2.0 – 6.2	Lean
21 – 25	2.5 – 7.3	
26 – 30	3.5 – 8.4	
31 – 35	4.5 – 9.4	
36 – 40	5.6 – 12.7	
41 – 45	6.7 – 13.8	
46 – 50	7.7 – 14.8	
51 – 55	8.8 – 15.9	
56 +	9.9 – 19.1	
18 – 20	6.3 – 12.5	
21 – 25	7.4 – 13.6	
26 – 30	8.5 – 16.4	
31 – 35	9.5 – 17.5	
36 – 40	12.8 – 18.6	
41 – 45	13.9 – 21.3	
46 – 50	14.9 – 22.4	
51 – 55	16.0 – 23.4	
56 +	19.2 – 24.5	
18 – 20	12.6 – 20.2	Average
21 – 25	13.7 – 21.2	
26 – 30	16.5 – 22.3	
31 – 35	17.6 – 23.4	
36 – 40	18.7 – 25.6	
41 – 45	21.4 – 26.6	
46 – 50	22.5 – 27.7	
51 – 55	23.5 – 28.7	
56 +	24.6 – 30.8	
18 – 20	20.3 – 24.9	
21 – 25	21.3 – 25.8	
26 – 30	22.4 – 26.9	
31 – 35	23.5 – 28.0	
36 – 40	25.7 – 29.0	
41 – 45	26.7 – 30.1	
46 – 50	27.8 – 31.2	
51 – 55	28.8 – 32.2	
56 +	30.9 – 33.3	

**Body Fat Ranges for Adult Males by Age (TopEndSports.com)**

Age	Excellent	Good	Fair	Poor
19-24	10.8 %	14.9 %	19.0 %	23.3 %
25-29	12.8 %	16.5 %	20.3 %	24.4 %
30-34	14.5 %	18.0 %	21.5 %	25.2 %
35-39	16.1 %	19.4 %	22.6 %	26.1 %
40-44	17.5 %	20.5 %	23.6 %	26.9 %
45-49	18.6 %	21.5 %	24.5 %	27.6 %
50-54	19.8 %	22.7 %	25.6 %	28.7 %
55-59	20.2 %	23.2 %	26.2 %	29.3 %
60 +	20.3 %	23.5 %	26.7 %	29.8 %

## One-mile Run

Zone Score	
Age	Time
14	9:30 to 7:00
15	9:00 to 7:00
16-17+	8:30 to 7:00

Average one-mile run time for all humans: **10:07:79**

**VO<sub>2</sub>max** is your capacity for oxygen intake or your aerobic "horsepower." It measures the millimeters of oxygen per kilogram of body weight per minute (ml/kg/min).

## VO<sub>2</sub>max Values

Zone Score	
Age	Rate
14-17+	42 to 52

## VO<sub>2</sub>max Ranges for Teenage Males

Age	Rate	Rating
13-19	> 55.9	Superior
	51.0 to 55.9	Excellent
	45.2 to 50.9	Good
	38.4 to 45.1	Fair
	35.0 to 38.3	Poor
	< 35.0	Very poor

## VO<sub>2</sub>max Ranges for Adult Males

Age	Very Poor	Poor	Fair	Good	Excellent	Superior
20-29	<33.0	33.0 - 36.4	36.5 - 42.4	42.5 - 46.4	46.5 - 52.4	>52.4
30-39	<31.5	31.5 - 35.4	35.5 - 40.9	41.0 - 44.9	45.0 - 49.4	>49.4
40-49	<30.2	30.2 - 33.5	33.6 - 38.9	39.0 - 43.7	43.8 - 48.0	>48.0
50-59	<26.1	26.1 - 30.9	31.0 - 35.7	35.8 - 40.9	41.0 - 45.3	>45.3
60+	<20.5	20.5 - 26.0	26.1 - 32.2	32.3 - 36.4	36.5 - 44.2	>44.2

### Curl-ups

Zone Score	
Age	No. Complete
14	24 to 45
15-17+	24 to 47

### Trunk Lifts

Zone Score	
Age	Inches Raised
14 to 17+	9 to 15

### Push-ups

Zone Score	
Age	No. Complete
14	14 to 30
15	16 to 35
16 to 17+	18 to 35

### Sit-and-reach

Zone Score	
Age	Right and Left
14 to 17+	8 or higher*

\* Pass or fail

### Modified Pull-ups

Zone Score	
Age	No. Complete
14	9 to 25
15	10 to 27
16	12 to 30
17+	14 to 30

### Shoulder Reach

Zone Score	
Age	Pass
14 to 17+	Touching fingertips together behind the back on both right and left sides

### Flexed Arm Hang

Zone Score	
Age	Seconds
14 to 17+	15 to 20

### California 9th Grade Boys 2006-2007

Test	Percent Passing FITNESSGRAM
Scored 42 or better VO <sub>2</sub> max:	<b>54.2%</b>
Scored within BMI zone:	<b>73.4%</b>
In zone for VO <sub>2</sub> max, BMI, curl-up, push-up, trunk lift, and sit-and-reach:	<b>32.1%</b>

### Sit-and-reach Ranges

Age	Rate	Rating
All	> 36+	Superior
	25 to 35	Excellent
	14 to 24	Good
	8 to 13	Average
	0 to 7	Fair
	-1 to -10	Poor
	< -11	Very poor

# FITNESSGRAM Testing for Females

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Age: \_\_\_\_\_

## Weight Health

Weight: \_\_\_\_\_ lbs

Height: \_\_\_\_\_ inches

Inches<sup>2</sup>: \_\_\_\_\_

BMI: \_\_\_\_\_ = (lbs x 703) / inches<sup>2</sup>

Skinfold Measures See: <http://www.topendsports.com/testing/bodyfat-percent.htm>  
Tricep: \_\_\_\_\_ (landmark: <http://www.topendsports.com/testing/skinfold-tricep.htm>)

Subscapular: \_\_\_\_\_ (landmark: <http://www.topendsports.com/testing/skinfold-subscapular.htm>)

Supraspinale: \_\_\_\_\_ (landmark: <http://www.topendsports.com/testing/skinfold-supraspinale.htm>)

Abdominal: \_\_\_\_\_ (landmark: <http://www.topendsports.com/testing/skinfold-abdominal.htm>)

Thigh: \_\_\_\_\_ (landmark: <http://www.topendsports.com/testing/skinfold-front-thigh.htm>)

Calf: \_\_\_\_\_ (landmark: <http://www.topendsports.com/testing/skinfold-medial-calf.htm>)

TOTAL = \_\_\_\_\_ **Tricep + Calf** = \_\_\_\_\_ (14 to 17+ only, see *Quest* book)

Yuhasz Equation for Females: \_\_\_\_\_ = (0.1548 x [tricep + subscap + supra + ab + thigh + calf] ) + 3.580

% Body Fat: \_\_\_\_\_ = (0.1548 x \_\_\_\_\_ ) + 3.580

## Aerobic Fitness

VO<sub>2</sub>max for Females: <http://www.bodyresults.com/e2vo2max.asp>

ml/kg/min: \_\_\_\_\_ = 108.94 - .84(BMI) - 8.41(run min) + .34(run min<sup>2</sup>)  
run min<sup>2</sup> = (\_\_\_\_\_)

\_\_\_\_\_ = 108.94 - .84(\_\_\_\_\_) - 8.41(\_\_\_\_\_) + .34(\_\_\_\_\_)

VO<sub>2</sub>max: \_\_\_\_\_ = 108.94 - (\_\_\_\_\_) - (\_\_\_\_\_) + (\_\_\_\_\_)

## Muscular Strength, Endurance, and Flexibility

Curl-ups: \_\_\_\_\_ no. completed (75 max.)

Trunk Lifts: \_\_\_\_\_ inches

Push-ups: \_\_\_\_\_ no. completed

Sit-and-reach: \_\_\_\_\_ left leg up

\_\_\_\_\_ right leg up

Pull-ups: \_\_\_\_\_ no. completed

Shoulder Stretch: \_\_\_\_\_ right side touch (yes/no)

\_\_\_\_\_ left side touch (yes/no)

Flexed Arm Hang: \_\_\_\_\_ seconds





## FITNESSGRAM Standards for Healthy Fitness Zone\*

### GIRLS

Age	One-mile run		PACER		Walk test & VO <sub>2</sub> max		Percent fat		Body mass index		Curl-up	
	min:sec		# laps		ml/kg/min						# complete	
5							32	17	21	16.2	2	10
6							32	17	21	16.2	2	10
7							32	17	22	16.2	4	14
8							32	17	22	16.2	6	20
9							32	17	23	16.2	9	22
10	12:30	9:30	15	41	40	48	32	17	23.5	16.6	12	26
11	12:00	9:00	15	41	39	47	32	17	24	16.9	15	29
12	12:00	9:00	23	41	38	46	32	17	24.5	16.9	18	32
13	11:30	9:00	23	51	37	45	32	17	24.5	17.5	18	32
14	11:00	8:30	23	51	36	44	32	17	25	17.5	18	32
15	10:30	8:00	23	51	35	43	32	17	25	17.5	18	35
16	10:00	8:00	32	61	35	43	32	17	25	17.5	18	35
17	10:00	8:00	41	61	35	43	32	17	26	17.5	18	35
17+	10:00	8:00	41	61	35	43	32	17	27.3	18.0	18	35

Age	Trunk lift		Push-up		Modified pull-up		Pull-up		Flexed arm hang		Back-saver sit & reach**	Shoulder stretch
	inches		# complete		# complete		# complete		seconds	inches		
5	6	12	3	8	2	7	1	2	2	8	9	
6	6	12	3	8	2	7	1	2	2	8	9	
7	6	12	4	10	3	9	1	2	3	8	9	
8	6	12	5	13	4	11	1	2	3	10	9	
9	6	12	6	15	4	11	1	2	4	10	9	
10	9	12	7	15	4	13	1	2	4	10	9	
11	9	12	7	15	4	13	1	2	6	12	10	
12	9	12	7	15	4	13	1	2	7	12	10	
13	9	12	7	15	4	13	1	2	8	12	10	
14	9	12	7	15	4	13	1	2	8	12	10	
15	9	12	7	15	4	13	1	2	8	12	12	
16	9	12	7	15	4	13	1	2	8	12	12	
17	9	12	7	15	4	13	1	2	8	12	12	
17+	9	12	7	15	4	13	1	2	8	12	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.

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