***Wappingers Central School District***

# HEALTHY LIFESTYLES

**Name:_____**

**Period:_____ Teacher:_____**

# WAPPINGERS CENTRAL SCHOOL DISTRICT

# *HEALTHY LIFESTYLES*

## *The 10th Grade Physical Education Curriculum*

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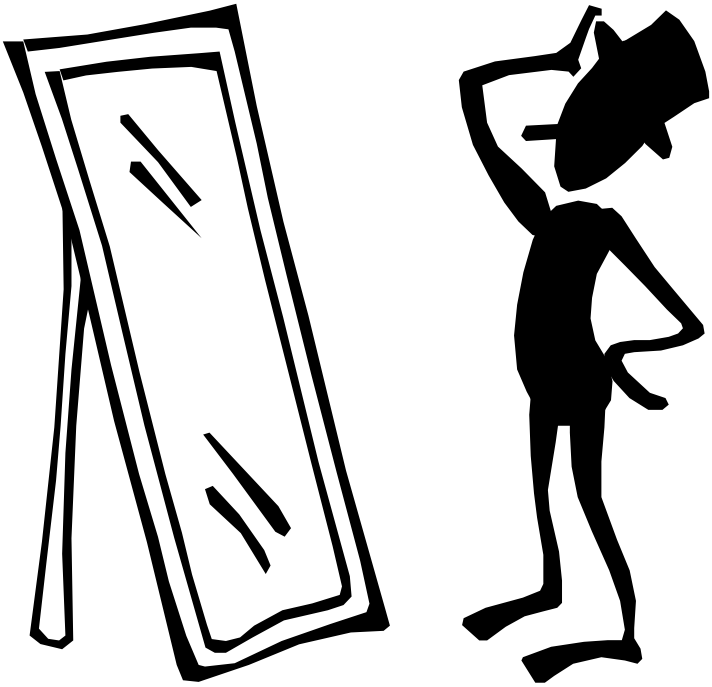


# Course Overview

# Looking Good
# Feeling Good

# Notes

# Benefits of Exercise

Regular exercise can help protect you from heart disease and stroke, high blood pressure, non-insulin-dependent diabetes, obesity, back pain, osteoporosis, and can improve your mood and help you better manage stress.

For the greatest overall health benefits, experts recommend that you do 20 to 30 minutes of aerobic activity three or more times a week and some type of muscular strengthening activity and stretching at least twice a week. However, if your are unable to do this level of activity, you can gain substantial health benefits by accumulating 30 minutes or more of moderate-intensity physical activity a day, at least five times a week.

If you have been inactive for a while you may want to start with less strenuous activities such as walking or swimming at a comfortable pace. Beginning at a slow pace will allow you to become physically fit without straining your body. Once you are in better shape, you can gradually do more strenuous activity.

**How physical Activity Impacts Health**

Regular physical activity that is performed on most days of the week reduces the risk of developing or dying from some of the leading causes of illness and death in the United States.

- Reduces the risk of dying prematurely
- Reduces the risk of heart disease
- Reduces the risk of developing diabetes
- Reduces the risk of high blood pressure
- Helps reduce blood pressure in those already suffering from hypertension
- Reduces the risk of developing colon cancer
- Reduces feelings of depression and anxiety
- Helps control weight
- Helps build and maintain healthy bones, muscles and joints
- Helps older adults become stronger and more mobile, reduces the risks of osteoporosis
- Promotes Psychological well-being

**Specific Health Benefits of Exercise**

*Heart Disease and Stroke*- Daily physical activity can prevent heart disease and stroke by strengthening your heart muscles, lowering your blood pressure, raising your high-density lipoprotein (HDL) levels (good cholesterol) and lowering your low-density lipoprotein (LDL) levels (bad cholesterol), improving blood flow and increasing your heart's working capacity.

*High Blood Pressure*- Regular physical activity can reduce blood pressure in those with high blood pressure levels. Physical activity also reduces body fatness, which is associated with high blood pressure.

*Non-Insulin-Dependent Diabetes*- By reducing body fatness, physical activity can help to prevent and control this type of diabetes.

*Obesity-* Physical activity helps to reduce body fat by building or preserving muscle mass and improving the body's ability to use calories. When physical activity is combined with proper nutrition, it can help control weight and prevent obesity, a major risk factor for many diseases.

*Back Pain*- By increasing muscular strength and endurance and improving flexibility and posture, regular exercise helps to prevent back pain.

*Osteoporosis*-Regular weight-bearing exercise promotes bone formation and may prevent many forms of bone loss associated with aging.

*Psychological Effects*- Regular physical activity can improve your mood and the way you feel about yourself. Researchers also have found that exercise is likely to reduce depression and anxiety and help you to better manage stress.

**A 2002 report from the US Department of Health and Human Services, Physical Activity Fundamental to Preventing Disease, showed that Millions of Americans suffer from illnesses that can be prevented or improved through regular physical activity.**

- 12.6 million people have coronary heart disease
- 1.1 million people suffer from a heart attack in a given year
- 17 million people have diabetes; about 90% to 95% of cases are type 2 diabetes, which is associated with obesity and physical inactivity; approximately 16 million people have 'pre diabetes'
- 107,000 people are newly diagnosed with colon cancer each year
- 300,000 people suffer from hip fractures each year
- 50 million people have high blood pressure
- Nearly 50 million adults (between the ages of 20 and 74), or 27% of the adult population, are obese; overall more than 108 million adults, or 61% of the adult population are either obese or overweight.

# Benefits of Exercise Study Guide

Answer the following questions according to the prior information and the glossary in the back of the book.

1.) List 5 risk factors that can be reduced by being physically active on a regular basis.

_____
_____
_____
_____
_____

2.) For the greatest overall health benefits, experts recommend that you do ____ to ____ minutes of aerobic activity ____ or more times a week and some type of muscular strengthening activity and stretching at least ____ a week.

3.) Fill in the blanks below According to the 2002 report from the US Department of Health and Human Services, Physical Activity Fundamental to Preventing Disease.

a) _____ people have coronary heart disease.
b) _____ people have high blood pressure.
c) _____ million people suffer from a heart attack in a given year.
d) _____ people are newly diagnosed with colon cancer each year.

4.) True or False - If you have been inactive for a while you may want to start with more strenuous activities such as walking or swimming at a comfortable pace.

# Interesting Facts on Self-Image

1. Did you know that if female mannequins were real women, they would be too thin to have babies?

2. If Barbie were a real woman she would have to walk on all fours due to her proportions.

3. If Ken were a real man, he would be 7'8" tall. An average man would have to add 7" to his chest and about 8" to his neck to equal Ken's measurements.

4. The average women wears between a size 12-14 yet media usually portrays women size 6 and below.

5. The models in the magazines are air brushed – no one, not even models, look that good without some help.

6. A psychological study in 1995 found that three minutes spent looking at fashion magazines caused 70% of women to feel depressed, guilty, and shameful.

7. A study of $5^{th}$ – $12^{th}$ graders found that 67% of frequent readers of fashion magazines are more likely to diet or exercise to lose weight, though only 29% were overweight.

8. 69% of the girls said pictures in fashion magazines influenced their idea of a perfect body.

9. Twenty years ago, models weighed 8% less than the average woman, today they weigh 23% less.

10. Sarah Michelle Gellar is 5'3" and weighs about 99 pounds, and has publicly said this about thin celebrities: "How can women be as thin as we are? We have personal trainers to work us out and we have specially prepared meals."

11. There are 3 billion women who don't look like supermodels and only 8 who do.

12. The average adult female is 5'4", weighs about 144 lbs. and wears a size 14 dress.

13. Marilyn Monroe wore a size 14 and is still considered beautiful.

14. One out of every four college aged woman has an eating disorder.

15. Most figures say that about 10% of people with eating disorders in the US are men, though even this number may be low.

16. Studies have found that young girls are more afraid of becoming fat than they are of nuclear war, cancer, or losing their parents.

17. Statistics show that the rate of anorexia in North America has increased by 800% in the last 25 years and the disorder has a 5% to 10% death rate.

18. An estimated two-thirds of teenage girls in America have abnormal eating behavior…it is so accepted that 60% of girls with serious anorexia and bulimia don't even recognize that they have a problem.

19. Self-image problems are not limited to young women…one million young men have eating disorders, and as many as 400,000 use steroids to get "buff".

20. In *Pretty Woman*, Julia Roberts' head appears several times on another woman's body. A body double is used because Julia's wasn't "good enough".

21. *YM* Editor-in-Chief explains that fashion designers only want "hangers" for their clothes. (As opposed to "real people")

22. Katie Ford, President of Ford Models, says that most fashion models are thin because they were born that way…it's their natural shape. She emphasizes, "What you see on the fashion page is a dream. What you are in reality is the best that you can be…not how thin you can be."

# *Chapter 2*

# Health & Skill Related Fitness

# Notes

Health Related Components of Fitness
Muscular Strength
Muscular Endurance
Cardiovascular Fitness
Flexibility
Body Composition

THE PARTS OF SKILL-RELATED FITNESS
balance
power
agility
coordination
reaction time
speed



14

## Chapter 2, Activity 1 Health vs. Skill Related Fitness

*Place the letter of the correct answer in the space provided.*

| | | | |
|---|---|---|---|
| 1. _____ | Cardiovascular Fitness | (a) | range of movement possible at various joints |
| 2. _____ | Aerobic Exercise | (b) | factors related to being stronger |
| 3. _____ | Muscular Strength and Endurance | (c) | factors related to being a better athlete |
| 4. _____ | Flexibility | (d) | the body's ability to maintain an upright posture through exercise |
| 5. _____ | Body Composition | (e) | relative percentage of muscle, fat, bone and other tissue |
| 6. _____ | Agility | (f) | ability to change the position of your body and to control the movement of your body |
| 7. _____ | Balance | (g) | ability to cover distance in a short time |
| 8. _____ | Speed | (h) | integration of hand and foot movement with your eyes |
| 9. _____ | Power | (i) | amount of time it takes to get moving |
| 10. _____ | Reaction Time | (j) | ability to do strength performance at a rapid pace |
| 11. _____ | Coordination | (k) | factor related to how well the systems of the body work |
| 12. _____ | Health Related Fitness | (l) | activities which force the body to handle large amounts of oxygen for a period of time |
| 13. _____ | Skill-Related Fitness | (m) | ability of the circulatory and respiratory systems to supply oxygen to muscles during exercise |

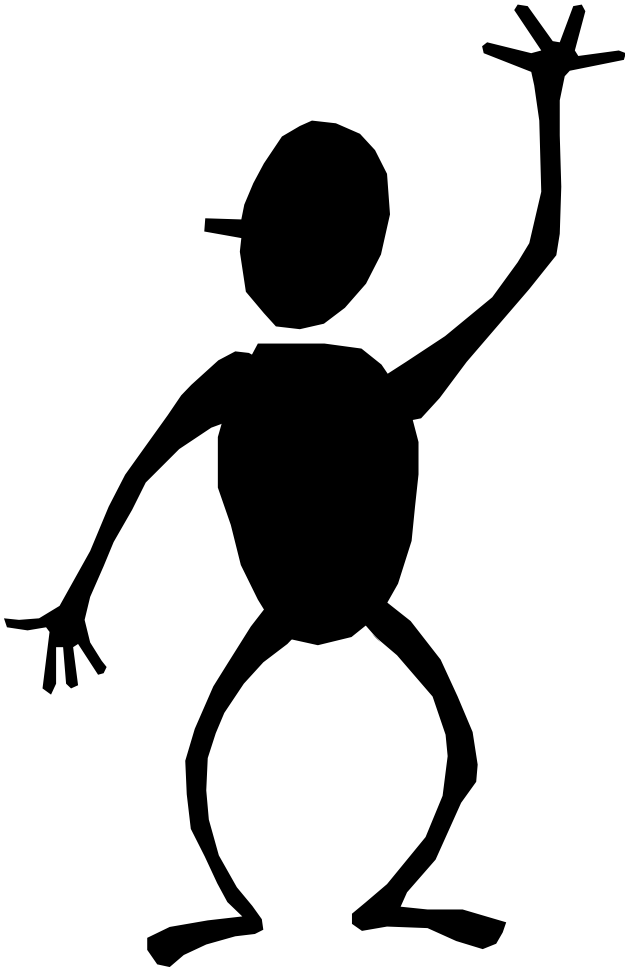
**Skill Related Fitness Components**

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

**Health Related Fitness Components**

1. _____
2. _____
3. _____
4. _____
5. _____

# *Chapter 3*



# Principles of Training

# Notes

# Principles of Training

## 1) The Principal of Overload

Definition: A rule that states that in order to improve fitness, one needs to do more physical activity than one normally does.

**F**-Frequency (How often you exercise)
**I**-Intensity (How hard you exercise)
**T**-Time (How long you exercise)

Example: An athlete determined to improve strength development increases work level intensity, while an athlete training for endurance lengthens the time/duration of the training session.

## 2) The Principal of Progression

Definition: A rule that states that the amount and intensity of physical activity needs to be increased gradually.

Example: Skills should be learned in a systematic progression. Starting with the most basic set of skills and evolving to the more complex. For example, kicking a soccer ball, the athlete's first attempt should be in standing stationary position the athlete should progress to the skill of running and striking the ball.

## 3) The Principal of Specificity

Definition: A rule that states that specific types of exercise improve specific parts of fitness or specific muscles.

Example: Specific training yields specific results. Train the desired muscles. The long distance runner trains by running not swimming or biking. Although the runner receives some training benefits from biking and swimming, specific garners the greatest return on training investment.

# Principles of Training

Name: _____ Date: _____ Class: _____

**Purpose**: To gain a better understanding of training principles, concepts.

Part 1: Principle of Overload

A: Define the principle of overload:

_____

_____

_____

_____

B: Wanda has not had instruction on how to train properly. For each statement listed below, check whether she should maintain, increase, or decrease overload.

| | Maintain Overload | Increase Overload | Decrease Overload |
|---|---|---|---|
| 1. Wanda is doing three sets of 4 to 8 repetitions to increase leg strength. Presently, she is only able to do 5 reps. | _____ | _____ | _____ |
| 2. Wanda has been jogging for some time and is able to complete her 2-mile jog in 15 minutes with ease. | _____ | _____ | _____ |
| 3. Wanda's leg muscles are tight the day after exercising. Pre-activity warm-ups consist of two stretching exercises totaling 30 seconds. | _____ | _____ | _____ |
| 4. Wanda's stomach is still protruding after two sit-ups are performed one time per week. | _____ | _____ | _____ |
| 5. Wanda has experienced discomfort in her arms after adding ten pounds to the barbell because her friend was lifting this much. | _____ | _____ | _____ |
| 6. Wanda has been jogging seven days a week. | _____ | _____ | _____ |

# Methods of Increase Overload FIT

Name: _____ Date: _____ Class: _____

**Purpose**: To gain a better understanding of the various methods to increase overload.

**Procedure**: Complete the following as directed.

The various systems of the body become stronger and function better when increased demands (overload) are placed upon them. The principle of overload may be accomplished by increasing one of the three variables: **FREQUENCY, INTENSITY, and TIME**.

1. The letters F.I.T. can be used to remind you how the principle of overload may be increased. Match each word on the left to its meaning on the right. Write the letter of the meaning in the space provided.

| | | |
|---|---|---|
| **F**requency | _____ | A. How long you exercise |
| **I**ntensity | _____ | B. How often you exercise |
| **T**ime | _____ | C. How hard you exercise |

2. Check whether each exercise listed below relates to frequency, intensity, or amount of time the exercise is performed.

| | Frequency | Intensity | Time |
|---|---|---|---|
| Stretching further | | | |
| Stretching more often | | | |
| Running faster | | | |
| Running a longer distance | | | |
| Running five days per week instead of three | | | |
| Increasing number of sets | | | |
| Making the heart beat faster | | | |
| Increasing number of repetitions | | | |
| Increasing amount of weight lifted | | | |
| Increasing the pace of your run | | | |
| Holding the stretch for longer | | | |
| Lifting weights three days per week instead of two | | | |
| Playing two games of racquetball instead of one | | | |
| Playing tennis five days a week instead of three | | | |

# *Chapter 4*

# Cardiovascular Fitness

# Notes

## Cardiovascular Run Log

Resting Heart Rate: _____

Heart Rate Zone: _____ - _____

(Lower) (Upper)

| Class Number | Date | Class Work Out | Time or Distance | Heart Rate | 5 Minute Recovery (below 120 bpm) | Extra Credit Times |
|---|---|---|---|---|---|---|
| 1 | | Jog 1 Lap<br>Walk 1 Lap<br>Jog 1 Lap | | | | |
| 2 | | 15 Min.<br>Interval Run | | | | |
| 3 | | Alt<br>Sequence<br>Jog Lap(3x)<br>Walk Lap(2x) | | | | |
| 4 | | Walk 1 Lap<br>Jog 2 Laps | | | | |
| 5 | | Walk 1 Lap<br>Jog 3 Laps | | | | |
| 6 | | Timed Mile | | | | <table><tr><td></td><td>Athletes</td><td>Non-Athletes</td></tr><tr><td>Male</td><td>6:30</td><td>8:30</td></tr><tr><td>Female</td><td>**8:30**</td><td>11:00</td></tr></table> |
| 7 | | 18 Mile Interval Run | | | | |
| 8 | | 1.5 Mile Run | | | | <table><tr><td></td><td>Athletes</td><td>Non-Athletes</td></tr><tr><td>Male</td><td>10:30</td><td>13:00</td></tr><tr><td>Female</td><td>**13:00**</td><td>16:00</td></tr></table> |

Student Name:_____ Period:_____ Odd, Even

# Cardiovascular Pacer Run Sheet

**Resting HR:_____ Maximum HR:_____**

**Training Heart Rate Zone: _____ to_____**

(Lower Limint) (Upper Limit)

**Target Heart Rate:_____**

| Lesson # | Date | Work Load / Intensity | Heart Rate | 5 Minute Recovery |
|---|---|---|---|---|
| 1 | | 4 Lap Self Evaluation | ___ x 15 sec = ____ BPM | ___ x 15 sec = _____BPM |
| 2 | | ___Walk 1 Lap___<br>___Jog 1 Lap,____<br>Sprint 100 Meters | ____x 15 sec = ____ BPM<br>____ x 15 sec = ____ BPM<br>____ x 15 sec = ____ BPM | ___ x 15 sec = _____BPM |
| 3 | | 15 Minute Interval<br>Walking Curves<br>Jogging Straights | ___ x 15 sec = ____ BPM | ___ x 15 sec = _____BPM |
| 4 | | Alternating Sequence<br>Walk (3x) & Jog (2x) | W____ x 15 sec = ____ BPM<br>J____ x 15 sec = ____ BPM<br>W____ x 15 sec = ____ BPM<br>J____ x 15 sec = ____ BPM<br>W____ x 15 sec = ____ BPM | ___ x 15 sec = _____BPM |
| 5 | | Walk 1 Lap<br>Jog 2 Consecutive Laps,<br>Walk 1 Lap | W____x 15 sec = ____ BPM<br>J____ x 15 sec = ____ BPM<br>W____ x 15 sec = ____ BPM | ___ x 15 sec = _____BPM |
| 6 | | Jog 3 Consecutive Laps<br>Walk 1 Lap | J____ x 15 sec = ____ BPM<br>W____ x 15 sec = ____ BPM | ___ x 15 sec = _____BPM |
| 7 | | 18 min Pacer Run<br>Maintain HR Zone | ___ x 15 sec = ____ BPM | ___ x 15 sec = _____BPM |
| 8 | | Timed 4 Lap/Mile<br>Evaluation | ___ x 15 sec = ____ BPM | ___ x 15 sec = _____BPM |

# PULSE RATE CONVERSION TABLE

| | | | Pulse Rate @ 15 Seconds | |
|---|---|---|---|---|
| | | | Beats | BPM |
| | | | 12 | 48 |
| | | | 13 | 52 |
| | | | 14 | 56 |
| | | | 15 | 60 |
| | | | 16 | 64 |
| | | | 17 | 68 |
| | | | 18 | 72 |
| | | | 19 | 76 |
| | | | 20 | 80 |
| | | | 21 | 84 |
| | | | 22 | 88 |
| | | | 23 | 92 |
| | | | 24 | 96 |
| | | | 25 | 100 |
| | | | 26 | 104 |
| | | | 27 | 108 |
| | | | 28 | 112 |
| | | | 29 | 116 |
| | | | 30 | 120 |
| | | | 31 | 124 |
| | | | 32 | 128 |
| | | | 33 | 132 |
| | | | 34 | 136 |
| | | | 35 | 140 |
| | | | 36 | 144 |
| | | | 37 | 148 |
| | | | 38 | 152 |
| | | | 39 | 156 |
| | | | 40 | 160 |
| | | | 41 | 164 |
| | | | 42 | 168 |
| Age | MHR (220-Age) | THR (MHR x .75) | 43 | 172 |
| | | | 44 | 176 |
| 14 | 206 | 155 | 45 | 180 |
| 15 | 205 | 154 | 46 | 184 |
| 16 | 204 | 153 | 47 | 188 |
| 17 | 203 | 152 | 48 | 192 |
| 18 | 202 | 152 | 49 | 196 |
| 19 | 201 | 151 | 50 | 200 |

# Carsiovascular Fitness and Training

Name: _____ Date: _____ Class:_____

1. Define cardiovascular fitness and describe what two body systems are being overloaded:
   _____
   _____
   _____
   _____

2. List 6 benefits of cardiovascular training:
   1. _____
   2. _____
   3. _____
   4. _____
   5. _____
   6. _____

3. **Heart Rates**
   Define and give the normal healthy number or range:
   a. Resting Heart Rate:
   _____
   _____
   b. Maximum Heart Rate:
   _____
   _____
   c. Target Heart Rate:
   _____
   _____
   d. Recovery Heart Rate:
   _____
   _____

4. **Principles of Training**

a. Define "overload" and how it relates to cardiovascular training:

_____

_____

b. Explain how "F.I.T." relates to overload:

**F_____**:_____

**I_____**:_____

**T:_____**:_____

c. Define progression and how it relates to cardiovascular training. How has your teacher used progression in your training?

_____

_____

_____

d. Define specificity:

_____

_____

_____

e. Define the terms:

Aerobic:

_____

_____

Anaerobic:

_____

_____

5. List 6 cardiovascular activities:
   1. _____
   2. _____
   3. _____
   4. _____
   5. _____
   6. _____

# EXERCISE BASICS

**Objective:** To learn how to do warm-up and cool-down exercises and to count heart rate.

To Count Your Pulse:

1. Place the fingertips (index and middle finger) over the carotid or radial artery.
2. Move the fingers around until a strong pulse can be felt.
3. Press gently so as not to cut off the blood flow through the artery.
4. Once the pulse is located, the heart rate can be determined in beats per minute.
5. At rest, this is done simply by counting the number of beats in one minute or by counting the number of beats in 15 seconds and referring to the conversion chart below.
6. During exercise, the key is to locate the pulse quickly and count the rate for a short period of time (15 seconds) because the heart rate has already slowed considerably within one minute after exercise ceases. Keep moving while quickly locating the pulse, then stop and take a 15 second count. Refer to the heart rate conversion chart below.

| Resting | Pulse location | Beats counted in 10 seconds | Beats in 15 seconds |
|---|---|---|---|
| Sitting | Wrist (radial) | x 6 = | x 4 = |
| Sitting | Neck (carotid) | x 6 = | x 4 = |
| Standing | Wrist | x 6 = | x 4 = |
| Standing | Neck | x 6 = | x 4 = |
| Sitting (repeated) | Wrist | x 6 = | x 4 = |
| Sitting (repeated) | Neck | x 6 = | x 4 = |
| Standing, counted by partner | Wrist | x 6 = | x 4 = |
| Standing, counted by partner | Neck | x 6 = | x 4 = |

Count your exercise heart rate as described above. Record your results in the chart.

**Counting Your Exercise Heart Rate**

| Exercise | Pulse Location | Number of Beats and Seconds | One-minute Heart Rate |
|---|---|---|---|
| After walking | | ____ beats in ____ seconds | |
| After running | | ____ beats in ____ seconds | |
| After active game | | ____ beats in ____ seconds | |

# Pulse, and Resting Heart Rates

**Part 1: Pulse Rate**

Purpose:

*To demonstrate the correct method for taking your pulse.*

Procedure:

*Follow the directions as given below.*

1. Find your pulse at your wrist (radial artery) or neck (carotid artery) and record in the space provided to find your **beats per minute** (**BPM**).

Resting Pulse (1st attempt/10 seconds): _____ X 6 = _____ BPM.

Resting Pulse (2nd attempt/15 seconds): _____ X 4 = _____ BPM.

**Part 2: Resting Heart Rate**

Purpose:

*1) To establish the resting heart rate so that an individual training target heart rate may be determined.*

*2) To evaluate the effects of cardiovascular training on the resting heart rate.*

Procedure:

*Follow the directions as given below.*

1. Always take the resting heart rate under the same conditions.

These conditions include:

a. resting from vigorous work or exercise for the previous 4 hours.
b. not eating for 2 hours prior to taking the pulse.
c. sitting or lying down for at least the previous 30 minutes.

2. **The ideal time to take the pulse is immediately after waking from a night sleep.**

**WHY?_____.**

3. Try taking your heart rate when you first wake up in the morning, and record your lowest score.

**Best Morning Resting Heart Rate: _____ BPM.**

| Resting Heart Rate | Rating |
|---|---|
| <59 | Excellent |
| 60-69 | Good |
| 70-79 | Average |
| 80-89 | Fair |
| 90> | Poor |

## Calculating your Target Heart Rate

**My resting heart rate is: _____**

# Step 1

Obtain your **MAXIMUM HEART RATE**:

220-your age: _____

# Step 2

Take your answer from **STEP 1** and subtract your resting heart rate:

_____ - _____ = _____

(step 1 answer) (Resting Heart Rate) (Step 2 Answer)

# Step 3

Finding your **LOWER and UPPER LIMITS**

**LOWER LIMIT:**

Take your answer from STEP 2 and multiply it by 50% and **ADD** your **RESTING HEART RATE** to your answer for your lower limit.

_____ x 50% = _____ + _____=_____

(step 2 answer) (.50) (resting heart rate) (lower limit)(125-150)

Take your answer from STEP 2 and multiply it by 85% and **ADD** your **RESTING HEART RATE** to your answer for your upper limit.

_____ x 85% = _____ + _____=_____

(step 2 answer) (.85) (resting heart rate) (upper limit)(175-195)

***Question:*** What do the lower and upper limits tell us about cardiovascular training? How is it beneficial?

| BPM | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | |
| 250 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 220 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 200 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 150 | | | | | | | | | | | | | | | | |
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| 100 | | | | | | | | | | | | | | | | |
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| 50 | | | | | | | | | | | | | | | | |
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| 0 | | | | | | | | | | | | | | | | |
| | THR | RHR | THR | RHR | THR | RHR | THR | RHR | THR | RHR | THR | RHR | THR | RHR | THR | RHR |
| | Day 1 | | Day 2 | | Day 3 | | Day 4 | | Day 5 | | Day 6 | | Day 7 | | Day 8 | |

NAME _____ TEACHER _____PER. ___

PROCEDURE: USE THE INFORMATION FROM YOUR CARDIOVASCULAR RUN LOG ON PAGE 25 TO COMPLETE THE GRAPH ON PAGE 34 AND TO ANSWER THE FOLLOWING QUESTIONS

PURPOSE: TO SELF EVALUATE HOW MUCH EFFORT I PUT INTO MY CV TRAINING AND WHAT BENEFITS I GAINED FROM THIS TRAINING.

1. LABLE THE 1ST COLUMN PULSE RATES(Y AXIS).
2. LABLE THE BOTTOM ROW DAYS (X AXIS).
3. DRAW A STRAIGHT LINE ACROSS THE PAGE TO SHOW YOUR MAXIUM HEART RATE AND THEN TO THE FAR RIGHT LABLE IT MHR.
4. DRAW A DOTTED LINE ACROSS THE 120BPM MARK TO REPRESENT WHERE YOUR RECOVERY HR SHOULD BE 5 MINUTES AFTER CVE.
5. DRAW A STRAIGHT LINE ACROSS THE GRAPH FOR YOUR UPPER TARGET HEART ZONE AND LABLE AT UTHR.
6. DRAW A STRAIGHT LINE ACROSS THE GRAPH TO REPRESENT YOUR LOWER TARGET HEART RATE ZONE AND LABLE IT LTHR.
7. DRAW A STRAIGHT LINE SHOWING YOUR RESTING HEART RATE AND LABLE IT RHR
8. PLOT A POINT FOR EACH DAY REPRESENTING YOUR CVE HEART RATE IN BPM IN THE APPROPRIATE COLUMN.
9. CONNECT THE POINTS REPRESENTING WITH A STRAIGHT LINE.
10. PLOT A POINT FOR EACH DAY REPRESENTING YOUR RECOVERY HEART RATE IN BPM IN THE APPROPRIATE COLUMN.
11. CONNECT THE POINTS REPRESENTING YOUR RECOVERY HEART RATE WITH A DOTTED LINE.

- WRITE ABS. IF YOU WERE ABSENT FOR A DAY
- WRITE MED. IF YOU WERE ON MEDICAL FOR A DAY OR DAYS
- WRITE UNP IF YOU WERE UNPREPARED FOR A CLASS

QUESTIONS:

A. OF THE EIGHT DAYS WE RAN HOW MANY TIMES DID YOU REACH YOUR THR ZONE _____
B. WHAT WAS THE REASON FOR YOU NOT REACHING YOUR THR ZONE
_____
_____
_____
C. AT YOUR 5 MINUTE RECOVERY WHAT SHOULD YOUR PULSE BE
_____

D. WHAT WAS YOUR RESTING PULSE BEFORE WE STARTED THIS UNIT _____ BPM

E. WHAT IS YOUR RESTING PULSE TODAY _____BPM

F. WHAT SHOULD HAPPEN TO YOUR RESTING PULSE THE LONGER WE TRAIN AND WHY

_____

_____

_____

G. LIST FOUR BENEFITS OF CV TRAINING:

1. _____
2. _____
3. _____
4. _____

H. LIST THREE OTHER CV ACTIVITIES YOU WOULD LIKE FOR US TO TEACH IN CLASS (BE CAREFUL WHAT YOU ASK FOR)

1. _____
2. _____
3. _____

# *Chapter 5*

# Preventative Exercises

# Notes

# Flexibility

Flexibility is defined as the ability of the joints of the body to move through their full range of motion. As a person becomes older, flexibility levels tend to decrease which causes the likelihood of obtaining an injury. For athletes and everyday people, flexibility can act as a type of injury prevention when it comes to strenuous activity on your body.

**There are 3 main types of Stretching:**

**STATIC:** Holding a stretch at its maximum point for 15-30 seconds.
(This is the stereotypical type of stretch that people are used to doing)

**DYNAMIC:** Constant, continuous MOVEMENT which achieves a wide range of motion in joints. Dynamic stretching can be done in combination with both upper and lower body movements, as well as static stretches. This type of stretch is becoming more and more popular for athletes today*
(EX. Arm Circles, High-Knees, Side-Shuffles)

**ISOSTATIC:** Stretching w/ a partner. Partner pushes you beyond your full range of motion. (WARNING: This type of stretching needs to be performed w/ an experienced partner who uses precaution throughout the movements)

A 4th type of stretching that can be harmful to an individual is known as **BALLISTIC** stretching. This is when an individual performs stretches using "bouncing" or "violent" motions throughout the exercise. This can cause injuries such as muscle strain, back pain and possible muscle tears!

**Flexibility & Lower Back injury**

Currently, over **75 million** Americans suffer from chronic low back pain each year. Over **80%** of the time this type of back pain is **PREVENTABLE.** The main causes of this pain are:

1. Physical Inactivity
2. Poor postural habits & body mechanics
3. Excessive Body Weight

When should I stretch?
Stretching is best done after warming up (increasing blood-flow) and before performing any physical activity. By stretching your muscles, tendons and ligaments to appropriate levels before vigorous activity, it helps to prevent your body from becoming injured.

Why should I stretch AFTER performing physical activity?
After physical activity, the blood flow to your muscles is at a high level, which makes it easier for them to stretch.

What is the best type of stretch I can perform?
It really depends on your sport. A combination of both static and dynamic stretches is utilized for some sports, while others focus entirely on either one or the other.

**How often do you perform stretches during the week?**

_____

_____

_____

**Do you know of any physical activities/exercises that involve flexibility?**

_____

_____

_____

**The More You Stretch = More Flexibility = Injury Prevention =**
**A Higher level of Physical Performance!**

# Other Alternative Forms of exercising:

**Zumba**
An aerobic class which turns Latin rhythms into a cardiovascular, calorie-burning routine which focuses on letting loose, having fun, and achieving fitness without realizing it.

For more information, please visit:
http://www.zumba.com/us/

**Pilates**
Pilates is a body conditioning routine that seeks to build flexibility, strength, endurance, and coordination without adding muscle bulk. In addition, Pilates increases circulation and helps to sculpt the body and strengthen the body's "core." People who do Pilates regularly feel they have better posture, are less prone to injury, and experience better overall health.

For more information, please visit:
http://kidshealth.org/teen/food_fitness/exercise/pilates.html

**Muscle Confusion Routines**
Muscle Confusion accelerates the body results process by constantly introducing new moves and routines so your body never plateaus, and you never get bored with your exercise routine. Whether you want to get lean or bulk up, there's an endless variety of ways to mix and match the routines to keep you motivated throughout the duration of your program. An example of these types of programs would be the P90x.

For more information, please visit:
http://www.beachbody.com/

**Kettle-Bells**
A weight-training routine which has your perform various types of exercises using a variety of weights. The exercises can be done using explosive or traditional movements with many options and variations of the routines.

There are various websites and routines provided on the internet.

**OUTDOOR ACTIVITIES**

| | | |
|---|---|---|
| Hiking | Water Sports | Kayaking/Canoeing |
| Orienteering | BMX Biking | Swimming |
| Mountain Biking | Skate Boarding | |

# Yoga

Yoga is an alternative type of physical activity that moves the body in various positions in order to achieve a well rounded workout. Proper breathing, form, and concentration are highly utilized throughout Yoga workouts, while focusing on a strong core and long, lean muscles and tendons which help with an individuals' overall flexibility.

A large **misconception** with Yoga is that it ONLY works on **flexibility** and is not beneficial to athletes who participate in many of the popular sports in our society.

What is your initial perception of Yoga?:

_____

_____

_____

_____

The Main **Health Related Fitness** Concepts Utilized:

| | |
|---|---|
| Muscular Endurance | Flexibility |
| Muscular Strength***** | Cardiovascular* |

***Optional**

Yoga can be performed individually, in small groups, or in large classes. The classes range from first time beginners to highly advance Yoga advocates. Here are a couple of places where Yoga classes are offered in our area:

1. http://www.tadasanany.com/
2. http://www.yogaway.info/
3. http://www.allsportfishkill.com/
4. **Gold's Gym** Poughkeepsie/Fishkill/Newburgh

Visit http://www.gymticket.com/yoga/NY/Poughkeepsie/ for a free guest pass to the gym!

Today, more professional athletes are taking the "Yoga Route" to achieving physical fitness. Here are just a few names of professional athletes who participate in YOGA on a regular basis:

| | | | |
|---|---|---|---|
| **Alex Rodriguez** | New York Yankees | **Evander Holyfield** | Professional Boxer |
| **Barry Bonds** | MLB HR Record Holder | **Maria Sharapova** | Pro Tennis |
| **Kevin Garnett** | Boston Celtics | **MARIST College Football Team** | |
| **Shaquille O'Neal** | Phoenix Suns | **US Women's National Soccer Team** | |
| **Michael Strahan** | New York Giants | **PACE University Baseball Team** | |
| **Andy Roddick** | Professional Tennis | | |
| **Mark Messier** | Professional Hockey | | |

# Basic Yoga Movements

Up-Dog

Down-Dog

Basic Plank

Plank/Wrist turns

Perfect Lunge/Warrior 1

Flat-Footed Squat

Eagle

Pigeon

Additional Exercise 1

Additional Exercise 2

# Relaxation and Stress Reduction Class

We will be doing a series of breathing and muscle tension and relaxation exercises today most of the tension and relaxation exercises we will do three times before moving on to the next area.

You will only get out of this what you put in.

Lie on your back (or other relaxing position).
Tense up all your muscles, hold it, then relax. (3 times)
Now close your eyes.
Picture yourself in a place that is the most relaxing place you can imagine.

Maybe it's on the beach with the warmth of the sun and cool ocean breezes.
Maybe it's relaxing on a raft in your backyard swimming pool, or relaxing in the shade of a big maple tree, while singing on a hammock in your backyard on a warm summer day.

Wherever the place is for you, put yourself there.
Now let's concentrate on your breathing. Envision the air that you breathe, entering through your nose, traveling down to your lungs, filling up the lungs then slowly traveling back out through your mouth.
IN THROUGH YOUR NOSE, OUT THROUGH YOUR MOUTH. (5 times)

**Feet and Legs (3X Each)**
Tense up your toes curling them down, then relax.
Curl your toes upward forcing your arch to the floor, then relax.
Force your entire foot upwards, stretching out the calf muscle, and relax.
Push your entire foot downwards tensing up the quadriceps muscles, and then relax.
Concentrate on tensing up your hamstrings and then relax.
Try and contract all of the muscles in your legs and feet and then relax.
GO BACK TO YOUR PEACEFUL PLACE AND CONCENTRATE ON YOUR BREATHING (5X).

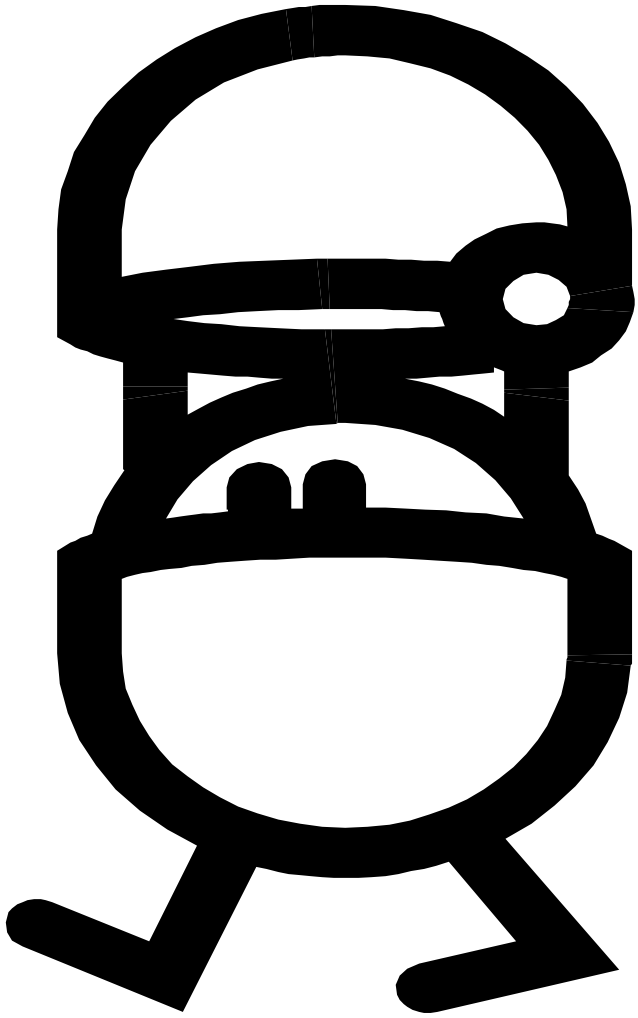
**Hands and Arms (3X Each)**
Make a fist with both hands, squeeze, hold it, and relax.
Tense up the muscles in your forearms and relax.
Place a slight bend in the elbow and tense the bicep muscles and then relax.
Turn hands so they are at your side with palms away, thumbs to the floor, then tense up the triceps muscles and relax.
Tense up all of the muscles in your hands and arms and relax.
GO BACK TO YOUR PEACEFUL PLACE AND CONCENTRATE ON YOUR BREATHING. (5X)

**Torso (3X Each)**
Tense up the abdominal muscles and relax.
Tense up the muscles in your lower back and butt by tensing the gluteus muscles and relax.
Tense up the pectoral muscles of the chest and relax.
Tense up the muscles of your middle and upper back by pinching the shoulder blades together and relax.
Tense up your shoulder muscles by shrugging your shoulders, hold it and relax.
Tense up the muscles in your neck, relax.
Tense up your cheek muscles and relax.
Concentrate on forcing your ears back and relax.
GO BACK TO YOUR PEACEFUL PLACE AND CONCENTRATE ON YOUR BREATHING. (5X)

**Full Body**
Concentrate on tensing up all the muscles in your body and relax.
GO BACK TO YOUR PEACEFUL PLACE AND CONCENTRATE ON YOUR BREATHING. (5X)

(Start Music)

# *Chapter 6*



# Body Composition

## BODY IMAGE IS SHAPED BY…….

Presenter:_____ Recorder:_____

Group Members:

_____

_____

_____

_____

_____

CATEGORY:_____

**Please identify at least 3 factors that influence our ideas about body image in relation to your groups' specific category. Please use complete sentences.**

**1.**

**2.**

**3.**

**4.**

**5.**

**6.**

## STUDY QUESTIONS

**Name: _____ Date: _____**

**Vocabulary Matching**
Place the letter of the correct answer in the space provide.

| | |
|---|---|
| _____ 1. Creeping obesity | A. Excessive accumulation of body fat |
| _____ 2. Lean body mass | B. Muscle tissue, bones, ligaments, and tendons |
| _____ 3. Obese | C. Exceeds desirable body weight by 10 percent according to height and weight charts |
| _____ 4. Somatotype | D. Gaining fat very slowly over a period of years |
| _____ 5. Overweight | E. Body type that has high % of body fat |
| _____ 6. Bulimia | F. Physical classifications of the human body |
| _____ 7. Long haul concept | G. Self-imposed state characterized by severe weight loss |
| _____ 8. Ideal body weight | H. Body type that has low % of body fat |
| _____ 9. Anorexia nervosa | I. Your weight with an acceptable percentage of body fat |
| _____10. Skinfold caliper | J. An instrument used to measure amount of body fat |
| _____11. Ectomorph | K. Body type that is muscular |
| _____12. Mesomorph | L. Slow, gradual weight reduction |
| _____13. Endomorph | M. Disease in which one eats excessively, then induces vomiting |

**True-False**

Circle "T" for all correct statements and "F" for all incorrect ones.

11. T F A square body with hard, rugged, prominent muscles best describes a pure ectomorph.

12. T F Staying lean will be more difficult for individuals with endomorphic characteristics.

13. T F How much you weigh is as important as your actual body composition.

14. T F An acceptable percentage of body fat for teenagers is 9-15 percent for males and 14-21 percent for females.

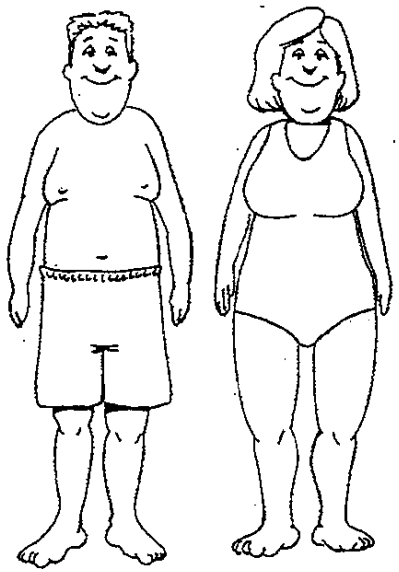
15. T F The most accurate method for testing body fat is with a skinfold caliper.

16. T F There is a close association between overweight people and heart disease.

17. T F Body fat weighs more than an equal amount of lean body mass.

# Body Types

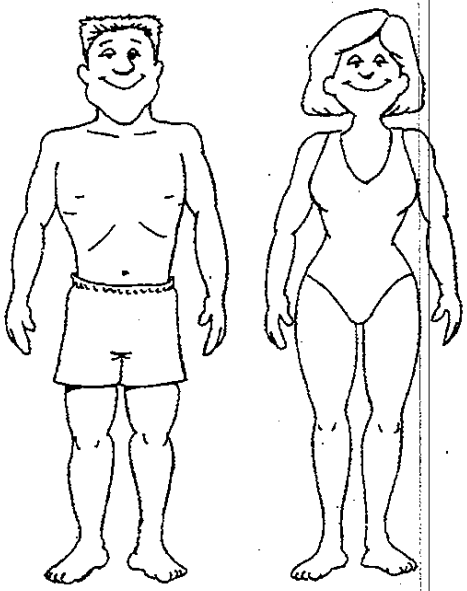
## Endomorph



–high percentage of body fat
–short neck
–large abdomen
–wide hips
–round, full buttocks
–short, heavy legs

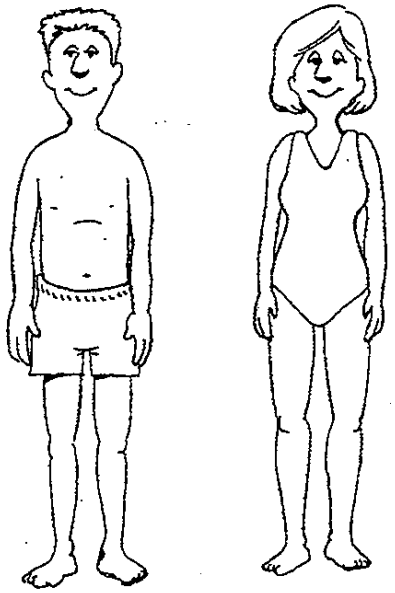
-Rounded Shoulders

## Mesomorph



–firm, well-developed muscles
–large bones
–broad shoulders
–muscular arms
–trim waist
–muscular buttocks
–powerful legs

## Ectomorph



–small bones
–thin muscles
–slender arms and legs
–narrow chest
–round shoulders
–flat abdomen
–small buttocks

# Assessing Body Type

Name:_____ Date:_____

Class:_____

**Purpose:** To help you determine body types by somatotyping

**Procedure:** Somatotyping is a method of classifying body types. Since most people have some characteristics of each body type to some degree, a three-digit number is used to identify a person's somatotype. The first digit represents endomorph, the second mesomorph, and the third ectomorph. A rating scale of 1 to 7 is used. The number 1 indicates the lowest degree and the number 7 indicates the highest degree of represented characteristics.

Somatotype Rating Scale

| 1234567 | 1234567 | 1234567 |
|---|---|---|
| Endomorph | Mesomorph | Ectomorph |

A pure endomorph would have a 7-1-1 somatotype rating. A pure mesomorph would be 1-7-1 and a pure ectomorph would be 1-1-7. Remember, most people are a combination of at least two body types. (The total of the 3 numbers should equal 9.)

**Sample Rating:** A professional wrestler might have a 3-5-1 somatotype. Which means his body type, while having some endomorphic characteristics, is more a mesomorph or meso-endomorph.

1. Stand in front of a full length mirror and study your front, back, and profile views. Rate your body's endomorphic, mesomorphic, and ectomorphic characteristics using the somatotype rating scale of 1 to 7.

   Somatotype: _____- _____ - _____

   Body type:

   _____

2. Have a classmate rate your body type. Compare ratings.

   Somatotype: _____ - _____- _____

   Body type: _____

3. Rate the body type of family members.

   Name:_____ Somatotype: _____- _____- _____
   Body type: _____

   Name: _____ Somatotype: _____ - _____- _____
   Body type: _____

   Name: _____ Somatotype: _____ - _____ - _____=
   Body type: _____

   Name: _____ Somatotype: _____ - _____ - _____
   Body type: _____

# Body Types

Which are you? ***Endomorph, Mesomorph, Ectomorph***

Exercise and lose weight? Lift weights and get big? If only it were that simple! Getting in shape is an inexact science, where students play scientists by experimenting on themselves. Tinkering here and there with training and dietary variables to achieve optimum results. Some labor hours each day in the gym and on the treadmills, while others can usually get the same results in half the time. Ever seen that woman who runs a couple days per week and looks to be in perfect shape? Or that guy who lifts when he gets a chance, yet is muscular and shredded beyond belief? What's responsible for such a wide variety of training and nutrition strategies that still lead to success? Genetics. Of course you probably already knew this. What you may not know are some of the specific strategies you can use to accelerate your progress based on your body type (and therefore your genetic makeup). Below we outline the three basic body types:

***Endomorphs:*** Endomorphs are generally those with a large bone structure. They can probably hoist some relatively heavy weights around the gym, but with a slower metabolism, fat loss is very difficult, which can hide their hard-earned muscle gains (or fat loss).

As opposed to the ectomorph, the endomorphs must concentrate on maximizing fat loss by adding aerobic type exercises. How much cardio? The American College of Sports Mdeicine recommends: "at least 30 minutes daily, preferably every day of the week in a target heart-zone rate of 60% to 75% of max." (Heart rate monitors are great for gauging your aerobic training). Resistance training should follow the cardiovascular portion with emphasis on muscular endurance (performing reps of 15 or more with short rest periods between sets). Unlike the ectomorph, the endomorph has more work to do in order to see progress. To help you out, we have included some general training guidelines below.

***Exercises:*** Include both compound and isolation movements in your resistance training. To avoid plateaus, mix up your exercises frequently, and the order in which you do them.

***Sets and Reps:*** Avoid training too heavy too often. Do a few more sets than usual, 12 for larger muscle groups and 8-10 for smaller ones. Keep reps high even on heavy days (12-25).

***Mesomorphs:*** This is the guy or gal who comes into the gym and doesn't really look as if he knows what he is doing, nor does he stay very long, yet grows like a weed. Some of these people make enormous progress despite their complete lack of training or nutritional knowledge – imagine what they could do if they did? Mesomorphs can basically get away with doing less and achieving more. However, mesomorphs are also more prone to over training because they see results so quickly. They also tend to do the same routine over and over again because they see results. This could in fact lead to decreased gains. For this reason it is recommended that mesomorphs change up their routine often. Pyramid training is an ideal method for this body type. Mesomorphs should include both compound and isolation movements in their routine. Meso's should hit the gym with a vengeance. They have a head start and should make the most of their genetic advantage. Cardiovascular exercise is of course recommended, but at a maximum of 30 minutes about 4X per week.

***Exercises:*** Traditional bodybuilding: basic compound exercises followed by single-joint isolation exercises.
***Sets and Reps:*** Focus on the 10-rep range. Cycle periods of heavy lifting with those using lighter weights (more reps), 3-4 sets/exercise with 2-4 exercises/body part.

***Ectomorphs:*** Ectomorphs have very high metabolic rates. This makes it very difficult for them to gain both muscle and strength. The ectomorph faces a much greater challenge than does the mesomorph in gaining muscle and therefore must be patient with muscle gains when resistance training. Those with this body type should stick to the basic hypertrophy phase of training (in the 8-12 rep max range). Fewer reps means going heavy – a high intensity workout. In turn, a longer rest period in between sets in necessary so you're thoroughly recuperated between sets. The ectomorph should limit high-intensity cardiovascular work. (Only about 20 min 3 X week rather than everyday). Finally, ectomorphs should stick to the basic mass-building movements that hit major muscle groups and deep muscle fibers. For example, squats, presses, and dead lifts work many major muscle groups at once and provide excellent muscle building stimulus. (Avoid isolation-type exercises). Be patient and watch out for overtraining. If you don't see the gains – adjust your workout intensity and diet rather than the frequency of your workout.

***Exercises:*** Basic compound movements (bench press, squat) avoid isolation exercises that work smaller amounts of muscle.
***Sets and Reps:*** Do up to 10 sets for larger body parts, 6-8 for smaller, doesn't take warm-up sets to failure. Focus on 6-10 range for reps, this is optimum for putting on size.

## ***Summary***

In summary, even if you have been training for years, finding the right combination of sets, reps, frequency, and intensity can be a difficult process. Make sure your making the most of your workouts by considering your genetic make-up. If you're a beginner, concentrate first on building a foundation and then utilize some of the parameters mentioned above. Finally, don't mindlessly hit the weights. Stick to a plan and keep a concise record so you can note what works for you. If you are not seeing results despite your honest efforts, throw out your current routine and try something new. Whatever you do… don't give up

Website to check your BMI:
http://www.react.ie/default.htm?/Health/Healthcheck/Calculator.htm

# RECOMMENDED BODY FAT LEVELS

Men and women carry fat in different places on their bodies. Men retain the greatest level of body fat in their abdominal area. Women retain the greatest level of body fat in their hips and thighs.
The recommended body fat levels for men and women are as follows

| Classification | Women<br>% Body Fat | Men<br>% Body fat |
|---|---|---|
| Essential Fat | 10-12% | 2-4% |
| Athletes | 14-20% | 6-13% |
| Fitness | 21-24% | 14-17% |
| Acceptable | 25-31% | 18-25% |
| Obese | 32 +% | 25+% |

It is considered unhealthy for men to have a body fat percentage below 3 percent, and women to have a body fat percentage below 11 percent. A body fat percentage of over 20 percent for men and over 30 percent for women are considered unhealthy.
Body fat percentage and body weight are affected by the following factors:

Genetic body type
Daily dietary habits
Physical activity level

**There are a number of common myths and misconception about body type.**

*-Fat can be turned into muscle, or vice versa*. Muscle is a tissue and fat is substance. Therefore muscle and fat cannot create one another.

*-If you weigh more on the scale, you must be overweight.* This is untrue. Muscle (lean body mass) weighs approximately 75 percent more than fat. In other words, you can increase your actual body weight without increasing your body fat. You can even increase your body weight and at the same time decrease your percentage of body fat.

-*Weighing yourself on a scale is the best way to determine if you are overweight and have too high a body fat level.* Untrue. In fact, feeling how your clothes fit on your body is a better way to measure body fat loss. You'll also get a better sense of whether you're losing body fat by looking in the mirror with no clothes on.

| Sport | Male | Female | Sport | Male | Female |
|---|---|---|---|---|---|
| Baseball | 12-15% | 12-18% | Rowing | 6-14% | 12-18% |
| Basketball | 6-12% | 20-27% | Track (Shot Putters) | 16-20% | 20-28% |
| Body Building | 5-8% | 10-15% | Skiing (X country) | 7-12% | 16-22% |
| Cycling | 5-15% | 15-20% | Sprinters | 8-10% | 12-20% |
| Football (Backs) | 9-12% | N/A | Soccer | 10-18% | 13-18% |
| Football (Lineman) | 15-19% | N/A | Swimming | 9-12% | 14-24% |
| Gymnastics | 5-12% | 10-16% | Tennis | 12-16% | 16-24% |
| High/Lomg Jumpers | 7-12% | 10-8% | Triathlon | 5-12% | 10-15% |
| Ice/Field Hockey | 8-15% | 12-18% | Volleyball | 11-14% | 16-25% |
| Marathon Running | 5-11% | 10-15% | Weightlifters | 9-16% | N/A |
| Racquetball | 8-13% | 15-22% | Wrestlers | 5-16% | N/A |

## Chapter 6, Activity 2: Weight chart

# Weight Chart for Women

Weight in pounds, based on ages 25-59 with the lowest mortality rate

| Height | Small Frame | Medium Frame | Large Frame |
|---|---|---|---|
| 4'10" | 102-111 | 109-121 | 118-131 |
| 4'11" | 103-113 | 111-123 | 120-134 |
| 5'0" | 104-115 | 113-126 | 122-137 |
| 5'1" | 106-118 | 115-129 | 125-140 |
| 5'2" | 108-121 | 118-132 | 128-143 |
| 5'3" | 111-124 | 121-135 | 131-147 |
| 5'4" | 114-127 | 124-138 | 134-151 |
| 5'5" | 117-130 | 127-141 | 137-155 |
| 5'6" | 120-133 | 130-144 | 140-159 |
| 5'7" | 123-136 | 133-147 | 143-163 |
| 5'8" | 126-139 | 136-150 | 146-167 |
| 5'9" | 129-142 | 139-153 | 149-170 |
| 5'10" | 132-145 | 142-156 | 152-173 |
| 5'11" | 135-148 | 145-159 | 155-176 |
| 6'0" | 138-151 | 148-162 | 158-179 |

# Weight Chart for Men

Weight in pounds, based on ages 25-59 with the lowest mortality rate

| Height | Small Frame | Medium Frame | Large Frame |
|---|---|---|---|
| 5’2” | 128-134 | 131-141 | 138-150 |
| 5’3” | 130-136 | 133-143 | 140-153 |
| 5’4” | 132-138 | 135-145 | 142-156 |
| 5’5” | 134-140 | 137-148 | 144-160 |
| 5’6” | 136-142 | 139-151 | 146-164 |
| 5’7” | 138-145 | 142-154 | 149-168 |
| 5’8” | 140-148 | 145-157 | 152-172 |
| 5’9” | 142-151 | 148-160 | 155-176 |
| 5’10” | 144-154 | 151-163 | 158-180 |
| 5’11” | 146-157 | 154-166 | 161-184 |
| 6’0” | 149-160 | 157-170 | 164-188 |
| 6’1” | 152-164 | 160-174 | 168-192 |
| 6’2” | 155-168 | 164-178 | 172-197 |
| 6’3” | 158-172 | 167-182 | 176-202 |
| 6’4” | 162-176 | 171-187 | 181-207 |

**Height-Weight Charts**

Your gender: _____ Age: _____ Height: _____ feet and _____ inches

Normal weight range from height-weight chart: _____

1. How does your target weight determined by skinfold measurements compare to your normal weight range from the height-weight chart? _____
   _____
2. Based on both skinfold measurements and the height-weight chart, how do you assess your current fat level? _____
   _____
3. Considering your body fatness level, do you think you need to change your exercise or diet? Explain. _____
   _____
   _____

\

# Skinfold Measurements

You can use skinfold measurements to estimate body fat percentage and target weight. For teenagers, upper arm (triceps) and calf measurements provide a good estimate of body fat percentage. Work with a partner to take each other's measurements. When you are performing the skinfold measurements on your partner use the instructions that follow. Write your results on your record sheet.

► **Triceps skinfold:** Pick up a skinfold on the middle of the back of the right arm, halfway between the elbow and the shoulder. The arm should hang loose and relaxed at the side.

► **Calf skinfold:** The person being tested stands and places the right foot on a chair. Pick up a skinfold on the inside of the right calf halfway between the shin and back of the calf, where the calf is largest.

1. Use your left thumb and index finger to pick up the skinfold. Do not pinch or squeeze the skinfold.
2. Hold the skinfold with your left hand while you pick up and use the caliper with the right hand to get a reading.
3. Place the caliper over the skinfold about one half inch below your finger and thumb. Hold the caliper on the skinfold for 3 seconds, and then note the measurement. Read the caliper measurement to the nearest on-half millimeter (mm), if possible.
4. Make three measurements each for the triceps and calf skinfolds. Use the middle of three measurements as the score.

## SKINFOLD MEASUREMENTS AND HEIGHT-WEIGHT CHARTS

**Objective:** To estimate body fat percentage and access body weight.

**Procedure:** Follow the instructions for estimating body fat using skinfold measurements and using height-weight charts. Record your measurements and results below. Space has been provided for future skinfold measurements.

**Skinfold Measurements (Triceps and Calf)**

| | **First Trial Date:** _____ | **Future Trial Dates:** _____ | _____ |
|---|---|---|---|
| Triceps | 1. _____ mm<br>2. _____ mm<br>3. _____ mm | 1. _____ mm<br>2. _____ mm<br>3. _____ mm | 1. _____ mm<br>2. _____ mm<br>3. _____ mm |
| Calf | 1. _____ mm<br>2. _____ mm<br>3. _____ mm | 1. _____ mm<br>2. _____ mm<br>3. _____ mm | 1. _____ mm<br>2. _____ mm<br>3. _____ mm |
| Middle triceps skinfold score | | | |
| Middle calf skinfold score | | | |
| Sum of triceps and calf skinfold scores | | | |
| % Body fat | | | |
| Body fatness fitness classification | | | |

# BODY FAT % SKINFOLD CALIPER

| Females | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Sum mm** | **% Fat** | **Sum mm** | **% Fat** | **Sum mm** | **% Fat** | **Sum mm** | **% Fat** |
| 1 | 6 | 16 | 15 | 31 | 24 | 46 | 33 |
| 2 | 6 | 17 | 16 | 32 | 25 | 47 | 34 |
| 3 | 7 | 18 | 16 | 33 | 25 | 48 | 34 |
| 4 | 8 | 19 | 17 | 34 | 26 | 49 | 35 |
| 5 | 8 | 20 | 17 | 35 | 27 | 50 | 36 |
| 6 | 9 | 21 | 18 | 36 | 27 | 51 | 36 |
| 7 | 9 | 22 | 19 | 37 | 28 | 52 | 37 |
| 8 | 10 | 23 | 19 | 38 | 28 | 53 | 37 |
| 9 | 11 | 24 | 20 | 39 | 29 | 54 | 38 |
| 10 | 11 | 25 | 20 | 40 | 30 | 55 | 39 |
| 11 | 12 | 26 | 21 | 41 | 30 | 56 | 39 |
| 12 | 12 | 27 | 22 | 42 | 31 | 57 | 40 |
| 13 | 13 | 28 | 22 | 43 | 31 | 58 | 41 |
| 14 | 14 | 29 | 23 | 44 | 32 | 59 | 41 |
| 15 | 14 | 30 | 23 | 45 | 32 | 60 | 42 |

| Males | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Sum mm** | **% Fat** | **Sum mm** | **% Fat** | **Sum mm** | **% Fat** | **Sum mm** | **% Fat** |
| 1 | 2 | 16 | 13 | 31 | 24 | 46 | 35 |
| 2 | 3 | 17 | 14 | 32 | 25 | 47 | 36 |
| 3 | 3 | 18 | 14 | 33 | 25 | 48 | 36 |
| 4 | 4 | 19 | 15 | 34 | 26 | 49 | 37 |
| 5 | 5 | 20 | 16 | 35 | 27 | 50 | 38 |
| 6 | 5 | 21 | 16 | 36 | 28 | 51 | 39 |
| 7 | 6 | 22 | 17 | 37 | 28 | 52 | 39 |
| 8 | 7 | 23 | 18 | 38 | 29 | 53 | 40 |
| 9 | 8 | 24 | 19 | 39 | 30 | 54 | 41 |
| 10 | 8 | 25 | 19 | 40 | 30 | 55 | 41 |
| 11 | 9 | 26 | 20 | 41 | 31 | 56 | 42 |
| 12 | 10 | 27 | 21 | 42 | 34 | 57 | 43 |
| 13 | 11 | 28 | 22 | 43 | 33 | 58 | 44 |
| 14 | 11 | 29 | 22 | 44 | 33 | 59 | 44 |
| 15 | 12 | 30 | 23 | 45 | 34 | 60 | 45 |

# DETERMINING IDEAL BODY WEIGHT

1. Determine your fat weight by multiplying your weight times your percentage of body fat.

   Weight _____

   x % Fat x _____

   Fat weight = _____

2. Determine your lean body weight by subtracting your fat weight from your weight.

   Weight _____

   - Fat Wt. -_____

   LBW = _____

3. Determine your range of ideal body weight by dividing .79 and .86 for females and .85 and .91 for males into your lean body weight. Remember, an acceptable range of body fat for teenagers is 18 to 25 percent for males and 25 to 31 percent for females.

**Females**

Ideal Minimum (14% Fat) = Lean Body Weight / .86 = _____ / .86 = _____ lbs.

Ideal Maximum (21% Fat) = Lean Body Weight / .79 = _____ / .79 = _____ lbs.

**Males**

Ideal Minimum (9% Fat) = Lean Body Weight / .91 = _____ / .91 = _____ lbs.

Ideal Maximum (15% Fat) = Lean Body Weight / .85 = _____ / .85 = _____ lbs.

| Average Body Fat Percentage of Athletes | | | | | |
|---|---|---|---|---|---|
| **Sport** | **Male** | **Female** | **Sport** | **Male** | **Female** |
| **Baseball** | 12-15% | 12-18% | **Rowing** | 6-14% | 12-18% |
| **Basketball** | 6-12% | 20-27% | **Shot Putters** | 16-20% | 20-28% |
| **Body building** | 5-8% | 10-15% | **Skiing (X country)** | 7-12% | 16-22% |
| **Cycling** | 5-15% | 15-20% | **Sprinters** | 8-10% | 12-20% |
| **Football (Backs)** | 9-12% | No data | **Swimming** | 9-12% | 14-24% |
| **Football (Linemen)** | 15-19% | No data | **Tennis** | 12-16% | 16-24% |
| **Gymnastics** | 5-12% | 10-16% | **Triathlon** | 5-12% | 10-15% |
| **High/long Jumpers** | 7-12% | 10-18% | **Volleyball** | 11-14% | 16-25% |
| **Ice/field Hockey** | 8-15% | 12-18% | **Weightlifters** | 9-16% | No data |
| **Racquetball** | 8-13% | 15-22% | **Wrestlers** | 5-16% | No data |

| Classification | Women (% fat) | Men (% fat) |
|---|---|---|
| **Essential Fat** | 10-12% | 2-4% |
| **Athletes** | 14-20% | 6-13% |
| **Fitness** | 21-24% | 14-17% |
| **Acceptable** | 25-31% | 18-25% |
| **Obese** | 32% plus | 25% plus |

## BODY FAT SCALE

Weight: _____

Body Fat Percentage: _____

## BODY FAT ANALYZER

| | Normal | Athlete | Average |
|---|---|---|---|
| **Body Fat Percentage:** | _____ | _____ | _____ |
| **Body Mass Index (BMI):** | _____ | _____ | _____ |

## PERCENT BODY FAT AVERAGE

Directions: To find your body fat percentage you need to take the average of all three methods. Follow the steps below:

| | | | | | | |
|---|---|---|---|---|---|---|
| _____ | + | _____ | + | _____ | = | _____ |
| Skinfold body fat % | | Body fat scale % | | Body fat analyzer % | | Total body fat % |

Once you have your total of all three methods of determining your body fat percentage, you now divide by 3.

| | | |
|---|---|---|
| _____ | Divide by 3 = | _____ |
| Total body fat % | | Your percent body fat |

# Determining your BMI

Body Mass Index (BMI) is a way of relating your height and weight to determine whether your body is proportionate, and whether you could benefit from either losing or gaining weight.

You can figure out your BMI on your own but you may need a calculator to perform these four easy mathematical steps.

1. **Divide your body weight by 2.2**

   For a 100 lb person, the calculation looks like this: 100 ÷ 2.2

2. **Measure your height in inches and divide it by 39.4.**

   So, for instance, if you are 5 feet tall, that means you are 60 inches tall.

   60 ÷ 39.4 = 1.5

3. **Multiply your answer to Step 2 by itself.**

   For example 1.5 x 1.5 ≈2.3

4. **Finally take the number you arrived at for Step 1 and divide it by the number you arrived at for Step 3.**

   Your final number is an estimation of your BMI. To carry our example through,

   50 ÷ 2.3 = 22. This means your BMI is approximately 22.

What does your final number mean? In 1999, the National Institues of Health (NIH) issued the following BMI guidelines:

**BMI of 18.5 or below: You're considered underweight.**

**BMI between 18.6 and 24.9: You're in a healthy range.**

**BMI between 25 and 29.9: You're considered overweight.**

**BMI of 30 or greater: You're considered obese.**

BMI is a good, though not perfect, guide for determining whether you may need to lose or gain weight. For example, BMI measurements for extremely muscular athletes or pregnant women are not very accurate indicators. And, if your BMI is between 25 and 29, you shouldn't necessarily freak out about your weight. You must also consider other health factors-such as high blood pressure, whether you exercise, your smoking habits, and your family history of developing heart disease-to decide whether you need to drop a few pounds.

# *Determining Your Body Mass Index (BMI)*
# ***(Circle your Body Weight, Height, & BMI)****

The table below has already done the math and metric conversions. To use the table, find the appropriate height in the left-hand column. Move across the row to the given weight. The number at the top of the column is the BMI for that height and weight.

| BMI (Kg/m2) | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 35 | 40 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Height (In.) | Weight (lbs.) | | | | | | | | | | | | | |
| 58 | 91 | 96 | 100 | 105 | 110 | 115 | 119 | 124 | 129 | 134 | 138 | 143 | 167 | 191 |
| 59 | 94 | 99 | 104 | 109 | 114 | 119 | 124 | 128 | 133 | 138 | 143 | 148 | 173 | 198 |
| 60 | 97 | 102 | 107 | 112 | 118 | 123 | 128 | 133 | 138 | 143 | 148 | 153 | 179 | 204 |
| 61 | 100 | 106 | 111 | 116 | 122 | 127 | 132 | 137 | 143 | 148 | 153 | 158 | 185 | 211 |
| 62 | 104 | 109 | 115 | 120 | 126 | 131 | 136 | 142 | 147 | 153 | 158 | 164 | 191 | 218 |
| 63 | 107 | 113 | 118 | 124 | 130 | 135 | 141 | 146 | 152 | 158 | 163 | 169 | 197 | 225 |
| 64 | 110 | 116 | 122 | 128 | 134 | 140 | 145 | 151 | 157 | 163 | 169 | 174 | 204 | 232 |
| 65 | 114 | 120 | 126 | 132 | 138 | 144 | 150 | 156 | 162 | 168 | 174 | 180 | 210 | 240 |
| 66 | 118 | 124 | 130 | 136 | 142 | 148 | 155 | 161 | 167 | 173 | 179 | 186 | 216 | 247 |
| 67 | 121 | 127 | 134 | 140 | 146 | 153 | 159 | 166 | 172 | 178 | 185 | 191 | 223 | 255 |
| 68 | 125 | 131 | 138 | 144 | 151 | 158 | 164 | 171 | 177 | 184 | 190 | 197 | 230 | 262 |
| 69 | 128 | 135 | 142 | 149 | 155 | 162 | 169 | 176 | 182 | 189 | 196 | 203 | 236 | 270 |
| 70 | 132 | 139 | 146 | 153 | 160 | 167 | 174 | 181 | 188 | 195 | 202 | 207 | 243 | 278 |
| 71 | 136 | 143 | 150 | 157 | 165 | 172 | 179 | 186 | 193 | 200 | 208 | 215 | 250 | 286 |
| 72 | 140 | 147 | 154 | 162 | 169 | 177 | 184 | 191 | 199 | 206 | 213 | 221 | 258 | 294 |
| 73 | 144 | 151 | 159 | 166 | 174 | 182 | 189 | 197 | 204 | 212 | 219 | 227 | 265 | 302 |
| 74 | 148 | 155 | 163 | 171 | 179 | 186 | 194 | 202 | 210 | 218 | 225 | 233 | 272 | 311 |
| 75 | 152 | 160 | 168 | 176 | 184 | 192 | 200 | 208 | 216 | 224 | 232 | 240 | 279 | 319 |
| 76 | 156 | 164 | 172 | 180 | 189 | 197 | 205 | 213 | 221 | 230 | 238 | 246 | 287 | 328 |

Body weight in pounds according to height and body mass index.

## HEALTHY LIFESTYLES: BODY COMPOSITION UNIT

A. My height is _____' _____", which transfers to _____ inches.

B. My present body weight is _____ pounds.

C. My ideal body weight is between _____ and _____ pounds.

D. I am a (male, female) with a (small, medium, large) frame.

E. The height and weight tables suggest my ideal body weight to be _____ pounds.

   This classifies me as (underweight, normal, overweight) according to the tables.

F. My somatotype score was _____ - _____ - _____.

G. My somatotype score classifies my body type as a(n) _____.

H. My Basal Metabolic Rate (BMR) is _____ kcal/day.

I. My calculated Body Mass Index (BMI) is _____.

   My BMI score classified me as (underweight, healthy, overweight, obese).

J. My skinfold body fat percentage was _____ %.

K. The body fat analyzer gave my body fat as _____% and my BMI as _____.

L. The body fat scale gave my body fat as _____%

M. The average of my three measured body fats is _____%

   This average puts me into the _____ range.

N. My lean body weight is _____pounds, which means I have _____ pounds of body fat.

   (Remember, acceptable range of body fat for teenagers is between 9 and 15% for males, and 14 to 21% for females.)

# Assessing Overall Activity Level

In assessing fitness, a first step is to evaluate daily activity levels. However, the specifics of each assessment will vary depending on age and gender. Basic activity "tests" have been devised by a number of experts. Completing a general fitness can indicate whether people are more fit than they think. A high activity score suggests that additional workouts are not needed for health. Lower scores indicate that more activity is desirable for long term health benefits. The following test helps evaluate activity levels for youth ages 12 to 18. It can be used as a guide in setting activity goals.

---

Directions: Answer yes or no to the following questions. Give yourself the number of points indicated for each yes answer. Then add your points to determine your level of physical activity.

1. I usually walk at least 1 mile per day. (1 point) _____
2. I take the stairs instead of elevators or escalators (1 point). _____
3. My daily routine involves:
    a. Sitting at school or watching TV at home (0 points). _____
    b. Some physical activity during or after school (4 points).
    c. Several hours of heavy sports or work activity (8 points).
4. I ride my bike or walk instead of riding in a car (1 point). _____
5. I do yard or housework for several hours each week (2 points). _____
6. I dance at least once per week (2 points). _____
7. I exercise when I am feeling stressed (2 point). _____
8. I do stretching exercises several times each week (3 points). _____
9. Two or more times a week I perform sit-ups, pull-ups or other exercises for at least ten minutes per session (3 points). _____
10. I lift weights or use exercise equipment:
    a. About once a week (2 points) _____
    b. About twice a week (4points)
    c. At least three times a week (7 points)
11. I engage in vigorous physical activity like jogging, aerobic dance or basketball (at least 20 consecutive minutes) _____
    a. About once a week (3 points)
    b. About twice a week (5 points)
    c. At least three times a week (9 points)

***Scoring:*** ***TOTAL***

| ***Points*** | |
|---|---|
| ***0 to 7:*** | ***Inactive. Becoming more active will help reduce your risk of health problems.*** |
| ***8 to 14:*** | ***Moderately Active.*** *This amount of exercise will help you improve your present level of fitness.* |
| ***15 to 25:*** | ***Active.*** *This amount of activity will maintain a good level of fitness.* |
| ***26 or more:*** | ***Very Active.*** *This amount of activity will maintain a high level of fitness.* |

# Determining Your BMR

Name_____ Date_____
Class_____

Basal Metabolic Rate (BMR): the energy your body needs (uses) to perform daily routine activities.

**Step 1** Record your present body weight (lbs)
(A)_____

**Step 2** Males multiply body weight by 11
(B)_____

Females multiply body weight by 10
(B)_____

Add both step (A) and step B together Subtotal (C) | |

**Step 3** Add daily activity needs
Based upon your activity level. Be Honest!
30% of your BMR if you are inactive
50% of your BMR if you are moderately active (D)_____%
75% of your BMR if you are active
100% if you are very active

Multiply the subtotal ( C) from above by the percentage (D) Subtotal (E) | |

**Step 4** Add total energy needs

Initial BMR Calories Subtotal
(C)_____
+
Calories used in activity Subtotal
(E)_____
+
Add 10% for digestion, etc. (10% of subtotal
C)_____

**Step 5** Grand total of calories burned per day that must be replaced to maintain present body weight

Calories burned per day | |

REMEMBER THAT 3500 CALORIES EQUALS 1 POUND OF FAT

## HOW MANY CALORIES DO I NEED?

Using your height, weight, and age this formula is a rough calculation of your resting metabolic rate (the number of calories you burn when you are at rest). This is the number of calories you need to get for normal metabolism. If your calorie level drops below this number for very long, your body will lower its metabolic rate to conserve energy and burn fewer calories.

| **Women** | | **Men** | |
|---|---|---|---|
| Height in inches x 4.7 = | _____ | Height in inches x 12.7 = | _____ |
| Weight in pounds x 4.3 = | + _____ | Weight in pounds x 6.3 = | + _____ |
| | = _____ | | = _____ |
| | + 655 | | + 66 |
| Subtotal | _____ | Subtotal | _____ |
| Age in years x 4.7 = | - _____ | Age in years x 6.8 = | - _____ |
| Total | _____ | Total | _____ |
| (Total equals resting rate of metabolism.) | | (Total equals resting rate of metabolism.) | |

**Things that affect your Metabolic Rate:**

- Muscle – More muscle increases your RMR
- Age – Your RMR decreases with Age
- A decrease in your RMR can be due to genetics
- The weather – living in a cold environment can increase your RMR. I know this sounds strange but you expend more energy while moving around in cold weather. It's a lot easier to move around in summer but more of an effort to "get going" in winter.
- Small regular meals will increase your RMR
- Pregnancy can increase your RMR
- Crash dieting will decrease your RMR

*Some Meal Ideas….*

## BREAKFAST

Greek Yogurt
Fruit
Wheat Toast with Peanut or Almond Butter
Cereal that has less than 12 grams of sugar in it per serving (1 Bowl)
Protein Shake (Whey Protein or Egg White Protein)
Whole Wheat Pancakes
Egg White Omelet
Turkey Sausage
Fruit Smoothie
Oatmeal

## Lunch

Grilled Chicken Sandwich
Rolled up Turkey and Swiss cheese
Grilled Chicken Salad
Tuna or Chicken Salad Wrap
Peanut Butter and Jelly on Whaet Bread
Chicken Quesadillas
BLT

## Dinner

Protein (Choose one from list on next page)
Complex Carb (Choose one from list on next page)
Vegetable (Choose on from list on next page)

## Proteins- 6 oz. servings (Deck of Cards)

White Fish (Pollack)
Salmon
Tuna
Tuna (4 oz. can)
Chicken
Chicken (4 oz. can)
Turkey (1 cup)
Lean Beef
Eggs (2 with yolk)
Eggs (4 whites)
Tofu

## Complex Carbohydrate

Brown Rice (1 cup)
Sweet Potato
Oatmeal (1/2 cup dry)
All Bran Cereal (1 cup)
Beans (1/2 cup)
Quinoa (1/4 cup dry)
Couscous (1 cup cooked)
Whole Gran Tortilla

## Vegetables (1 cup serving)

Asparagus (4 spears)
Broccoli (1/2 cup)
Spinach
Onions
Tomato
Cucumber
Celery
Carrots
Romaine Lettuce
Beets
Eggplant
Green Beans
Green, Red, or Yellow Peppers
Iceberg Lettuce
Soybean
Zucchini

## Fruits (1 cup)

Apple
Banana
Blueberries
Cantaloupe
Grapefruit (1/2)
Grapes
Nectarine
Orange
Pear
Raspberries
Plum
Cherries
Watermelon
Peach

## Nuts and Snacks

Walnuts
Cashews
Almonds
Trail Mix (one without M&M's in it)
Celery or Apple slices with Peanut Butter (natural)
Rice Cakes
Olive Oil (1 Tbs)
Hummus (1 Tbs)
Avocado
Meijer Soy Crisps
Kashi Go Lean Granola Bars
Special K Chips
Cut up Veggies with Hummus (peppers, baby carrots, cucumbers)
Fruit

# *Chapter 7*

# Muscular Fitness Training

# NOTES

# Weight Room Notes

- You need to give your body 48-72 hours to recover
- Every time that you lift you slightly tear ( a good tear) your muscle and it needs time to build back up.
- D.O.M.S. – **D**elayed **O**n-set **M**uscle **S**oreness – 48 -72 hours when you are sore and your muscles are building back up bigger.
- You should NOT work out the same muscle group every day. Also, try to vary your lifts for each muscle group.

❖ Muscular endurance (Tone)

- 30-60% of your max
- Low weight, high reps, high sets
- 8-15 reps per lift, 3+ sets per lift

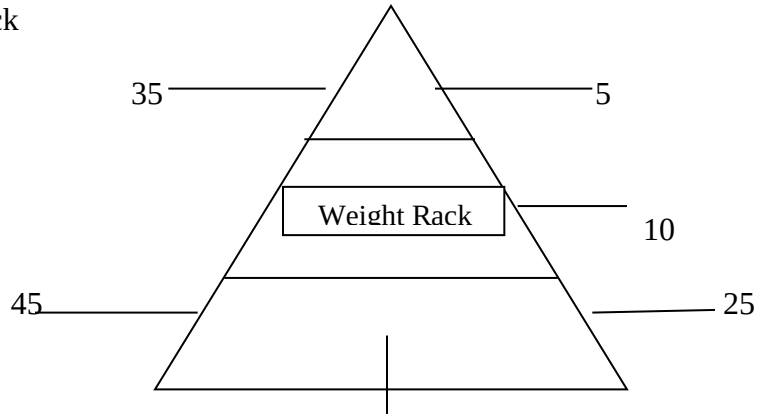
❖ Muscular Strength

- 60-90% of your max
- High weight, low reps, low sets
- 3-6 reps per lift, 3 sets per lift

❖ What is the difference between a set and a rep?

- Set: a set is a group of reps
- Rep: (repetition) number of times you do a full range of motion
- After each set you should increase your weight

❖ Weight Rack




- Weight Lifting Bars

- Olympic Bar (long) – 45 lbs.
- Short straight bar – 25 lbs.

- Curl Bar (wavy, E-2 Curl Bar) – 151 lbs.
- 15 lbs

# Benefits of Weight Training

1. Weight training tones your muscles which looks great and raises your basal metabolism…which causes you to burn more calories 24 hours-a-day. You'll even burn more calories while you're sleeping.
2. Weight training can "reverse" the natural decline in your metabolism which begins at age 30.
3. Weight training energizes you.
4. Weight training has a positive effect on all of your 650+ muscles.
5. Weight training strengthens your bones reducing the risk of osteoporosis.
6. Weight training improves your muscular endurance.
7. Weight training will not develop big muscles on women…just toned muscles.
8. Weight training makes you strong. Strength gives you confidence and makes daily activities easier.
9. Weight training makes you less prone to low-back injuries.
10. Weight training decreases your resting blood pressure.
11. Weight training decreases your risk of adult onset diabetes.
12. Weight training decreases your gastrointestinal transit time, reducing your risk for developing colon cancer.
13. Weight training increases your blood level of HDL cholesterol (the good type).
14. Weight training improves your posture.
15. Weight training improves the functioning of your immune system.
16. Weight training lowers your resting heart rate, a sign of a more efficient heart.
17. Weight training improves your balance and coordination.
18. Weight training elevates your mood.

# Weight Room Etiquette

Before entering:

- Before lifting in the weight room, there should ALWAYS be an adult on duty. If there is NOT, please do NOT use the facilities.
- When you first walk into the weight room make sure everything is in it's correct place. If it is not, please find the person on duty and they will take care of the matter.
- Know what you would like to lift before hand, this eliminates people walking around clogging up the weight room.

While in the weight room:

- No gum, candy, soda or food
- No horseplay
- No book bags

Safety:

- Warm up
- Before using any of the equipment, know what it does and how it works.
- Always use a spotter.
- When using either the free weights or weight machines, use proper technique.
- Balance, grip, stance weight.
- While lifting: INHALE – through the nose-when lowering

  EXHALE – through the mouth-when lifting

- Keeps clothes tucked in so they don't snag.
- **START OUT LIGHT, THEN WORK YOUR WAY UP IN WEIGHT**
- Go slowly and focus on correct technique.

Questions:

If you have any questions about a machine or an exercise, please ask!

# Muscular Fitness Definitions

**Atrophy –** the shrinking of muscle. Muscular atrophy generally begins approximately 48 hours after lifting

**Lactic Acid** – fills the muscles after lifting. Generally associated with the pain and stiffness after working out.

**Muscular Strength** – the ability of a muscle group to apply maximal force against a resistance one time.

**Muscular Endurance** – the ability to repeat muscle movement over a period of time.

**Fast Twitch Muscle Fibers(White Muscle Fibers)** – anaerobic, fatigue quickly, but are more explosive. Associated with muscular strength.

**Slow Twitch Muscle Fibers(Red Muscle Fibers)** – aerobic nature, large blood supply

**Repetitions(Reps)** – the number of times you do a lift. Dependent on type of workout.

**Sets** – the groups of reps. Generally 2-5, usually 3.

| **Six Major Muscle Groups:** | **Benefits of Strength Training** |
|---|---|
| 1. Arms | Improved Posture |
| 2. Legs | Better Appearance |
| 3. Abdominals | Less Injuries (Joints more stable) |
| 4. Chest | Better Figure |
| 5. Shoulders | Protects against Osteoporosis |
| 6. Back | Burns more calories |

## Workout Guidelines

| *Muscular Strength Workouts:* | *Muscular Endurance Workouts* |
|---|---|
| *1.* 60-90% of maximum | 30-60% of maximum |
| *2.* 2-8 reps | 8-15 reps |

## Principles of Training

*Principle of Overload*

1. Frequency – how often, 3-4 times per week
2. Intensity – resistance, the number of pounds lifted
3. Time – the number of repetitions

*Principles of Progression*

Start slowly, increase gradually

*Principles of Specifivity*

Isolating the muscles, ie.: Bench press isolates the muscles of the chest not the legs.

**Suggested Starting Weights for**

# Muscular Endurance Workout (8-15 reps)

| Exercise | Boys | Girls |
|---|---|---|
| **CHEST** | | |
| Bench Press | 75-150 | 35-75 |
| Inclines | 55-135 | 35-65 |
| Pec Deck | 25-75 | 5-25 |
| D/B Bench | 20-50 | 15-35 |
| Flies | 10-25 | 5-15 |
| D/B Inclines | 20-35 | 15-35 |
| | | |
| **LOW BACK** | (Low weights and work slowly) | |
| SLDL | 45-65 | 35-55 |
| Hyperextension | 5-25 | 0-10 |
| | | |
| **UPPER BACK** | | |
| Bent Over Rows | 45-95 | 25-65 |
| Seated Cable | 70-120 | 50-100 |
| Lat Pulls | 50-100 | 20-70 |
| | | |
| **SHOULDERS** | | |
| D/B Laterals | 5-20 | 3-12 |
| Military Press | 45-95 | 25-45 |
| Upright Rows | 45-75 | 25-55 |
| Plate Raises | 25-45 | 5-10 |
| D/B Shoulder | 20-50 | 10-30 |
| D/B Frontals | 8-25 | 3-12 |
| | | |
| **BICEPS** | | |
| Alternating Bicep Curls | 20-40 | 10-30 |
| Curls | 25-75 | 20-50 |
| Wrist Curls | 25-75 | 15-45 |
| | | |
| **TRICEPS** | | |
| D/B Extensions | 10-30 | 8-20 |
| Pushdowns | 30-60 | 20-50 |
| D/B Kickbacks | 10-20 | 5-12 |
| | | |
| **LEGS** | | |
| Calf Raises | 25-75 | 15-45 |
| Leg Extensions | 30-70 | 20-60 |
| Leg Curls | 20-50 | 20-40 |
| Leg Press | 150-300 | 100-250 |
| Lunges | 15-30 | 10-20 |

*some students may fall above/below these suggested starting weights

# JJ Weight room Log

| Chest | Date | 1st Set | | 2nd Set | | 1 Rep Max |
|---|---|---|---|---|---|---|
| | | LBS | Reps | LBS | Reps | |
| Flat Bench Press | | | | | | |
| Incline Bench | | | | | | |
| Dips | | | | | | |
| DB Bench Press | | | | | | |
| DB Flies | | | | | | |
| Push Ups | | | | | | |
| Cardio | | Cal: | Dist: | Time: | | |

| Back | Date | 1st Set | | 2nd Set | |
|---|---|---|---|---|---|
| | | LBS | Reps | LBS | Reps |
| Bent Over Rows | | | | | |
| SL Deadlifts | | | | | |
| Lat Pulldowns | | | | | |
| T Bar Row | | | | | |
| Hyper Extensions | | | | | |
| Pullups | | | | | |
| Cardio | | Cal: | Dist: | Time: | |

| Shoulders | Date | 1st Set | | 2nd Set | |
|---|---|---|---|---|---|
| | | LBS | Reps | LBS | Reps |
| DB Lateral Raises | | | | | |
| DB Military Press | | | | | |
| Upright Rows | | | | | |
| DB Frontal Raises | | | | | |
| Shrugs | | | | | |
| Seated PL Military | | | | | |
| Cardio | | Cal: | Dist: | Time: | |

| Date | 1st Set | | 2nd Set | | 1 Rep Max |
|---|---|---|---|---|---|
| | LBS | Reps | LBS | Reps | |
| | | | | | |
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| | Cal: | Dist: | Time: | | |

| Date | 1st Set | | 2nd Set | |
|---|---|---|---|---|
| | LBS | Reps | LBS | Reps |
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| Date | 1st Set | | 2nd Set | |
|---|---|---|---|---|
| | LBS | Reps | LBS | Reps |
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| | Cal: | Dist: | Time: | |

| | Date | 1st Set | | 2nd Set | | Date | 1st Set | | 2nd Set | | Date | 1st Set | | 2nd Set | | Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Arms** | | LBS | Reps | LBS | Reps | | LBS | Reps | LBS | Reps | | LBS | Reps | LBS | Reps | |
| Db Bicep Curl | | | | | | | | | | | | | | | | |
| Db Overhead Ext. | | | | | | | | | | | | | | | | |
| Bicep Curl w/ bar | | | | | | | | | | | | | | | | |
| DB Kickbacks | | | | | | | | | | | | | | | | |
| Hammer Curls | | | | | | | | | | | | | | | | |
| Wrist Curls | | | | | | | | | | | | | | | | |
| Cardio | | Cal: | Dist: | Time: | | | Cal: | Dist: | Time: | | | Cal: | Dist: | Time: | | |

| | Date | 1st Set | | 2nd Set | | Date | 1st Set | | 2nd Set | | Date | 1st Set | | 2nd Set | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Legs** | | LBS | Reps | LBS | Reps | | LBS | Reps | LBS | Reps | | LBS | Reps | LBS | Reps | |
| Lunges w/ DB's | | | | | | | | | | | | | | | | |
| Seated Calf Raise | | | | | | | | | | | | | | | | |
| Leg Extension | | | | | | | | | | | | | | | | |
| Leg Curls | | | | | | | | | | | | | | | | |
| Step ups w/ Db's | | | | | | | | | | | | | | | | |
| Box Squats | | | | | | | | | | | | | | | | |
| Cardio | | Cal: | Dist: | Time: | | | Cal: | Dist: | Time: | | | Cal: | Dist: | Time: | | |

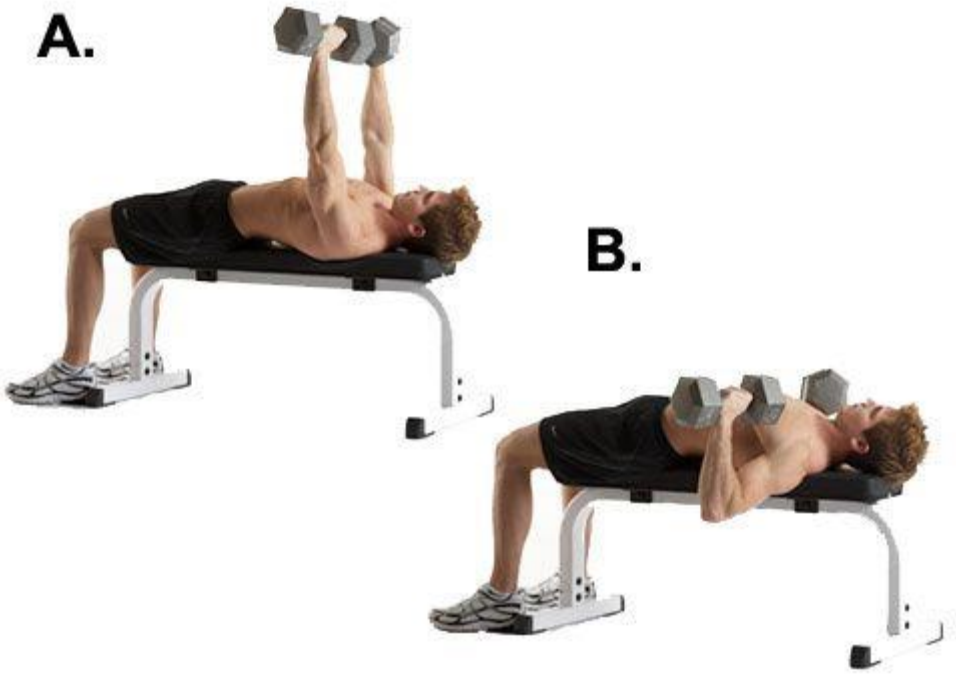
# CHEST

## Bench Press

# Incline Bench Press

# DIPS

# DB Bench



# DB Flies

# Push Ups /

# Wall Push Ups /

# Box Push Ups

# BACK

## Bent Over Rows

# SLDL

# Lat Pull Downs

# T Bar Row

# Hyperextensions

# Pull Ups

# Shoulders

## Lateral Raises

# Military Press with Dumbbells

# Upright Rows

# Frontal Raises

# Shrugs

# Plate Loaded Shoulder Press

# Arms

## DB Bicep Curl

# DB Tricep Extension

# Bicep Preacher Curl w/Bar


# DB Kickbacks

# Hammer Curl

# Wrist Curls w/ Barbell

# Legs

## Plate Loaded Seated Calf Raise

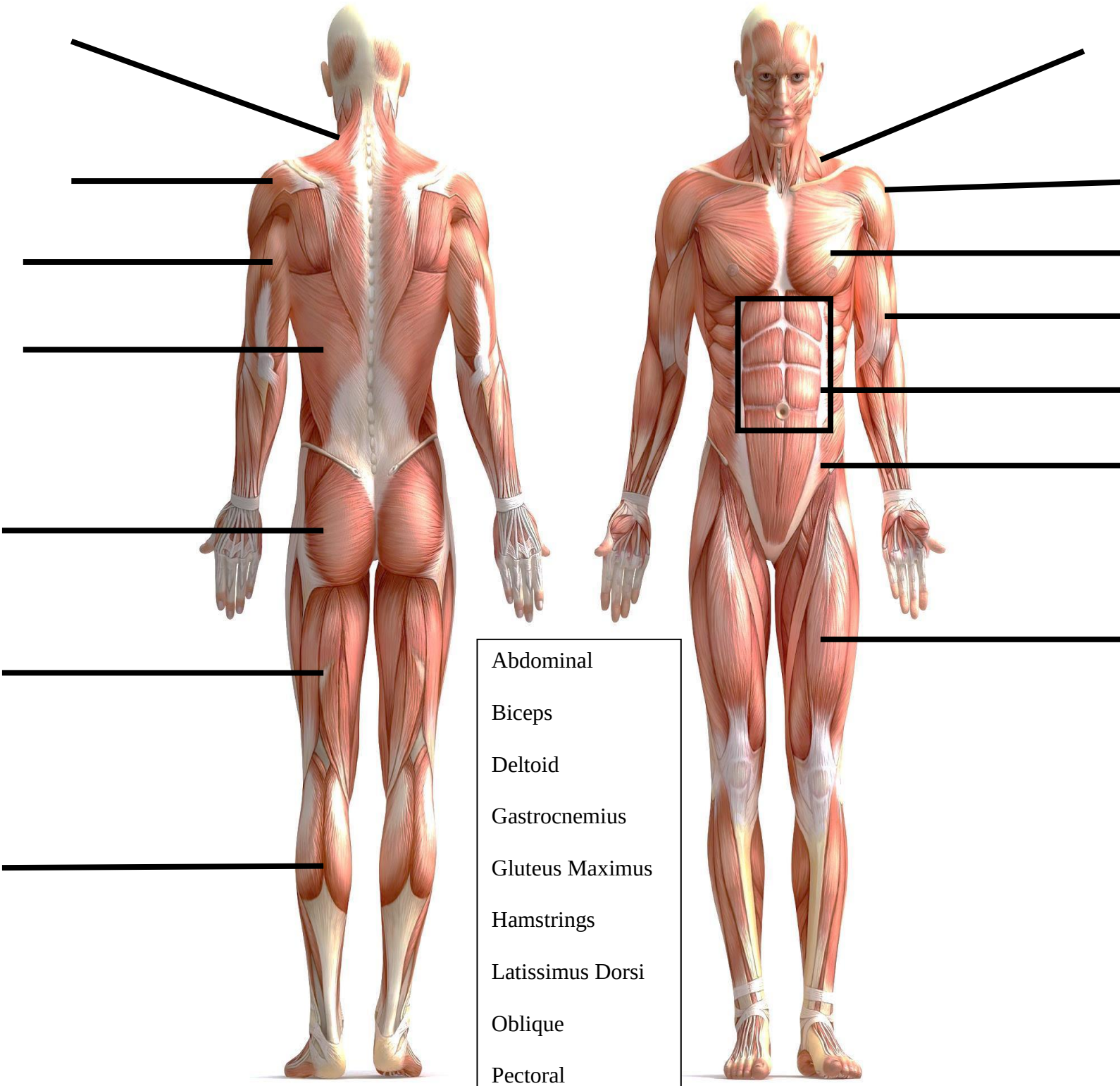
# Leg Extensions

# Leg Curls

# DB Step Ups

# Squats or Squat Variation

# (Box Squat, Sumo, w/DB)



Abdominal

Biceps

Deltoid

Gastrocnemius

Gluteus Maximus

Hamstrings

Latissimus Dorsi

Oblique

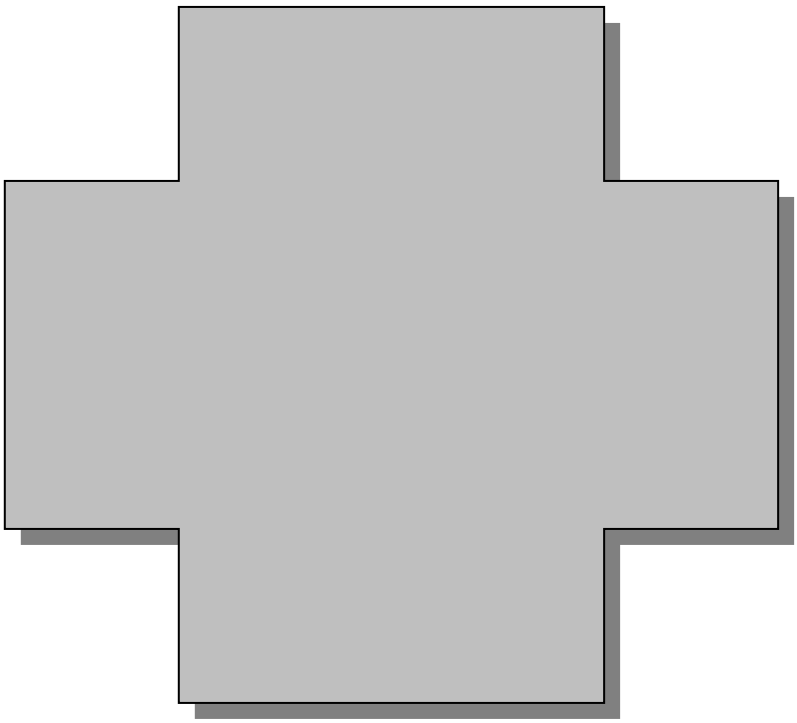
Pectoral

Quadriceps

Trapezius

Triceps

# Chapter 8



# Life Saving Skills

# CPR

# Notes

# Chapter 9

# Goal Setting, Fitness Testing & Review

# Notes"By The Numbers– HL Review

*In the space provided, mark the corresponding letter*

1. _____ 220-age
2. _____30 : 2
3. _____60-80
4. _____2
5. _____3-6
6. _____8-15
7. _____45
8. _____48-72
9. _____15-20
10. _____18-25
11. _____25-31

A. Weight of the Olympic weight lifting bar (in ibs).

B. # of repetitions you should complete to improve you muscular endurance.

C. Average # of Beats per Minute (BPM) for your resting heart rate.

D. Amount of minutes you should maintain your pulse in the target heart rate zone to achieve optimal cardiovascular fitness benefits.

E. Depth (in inches) of compressions for adult CPR.

F. # of repetitions you should complete in order to complete on order to improve muscular strength.

G. Ratio of compressions to breaths for CPR

H. Formula to find your maximum heart Rate

I. # of hours you should allow your Body to recover before working out the same muscle group.

J. Acceptable % of body fat for males

K. Acceptable % of body fat for females.

Wappingers Central School District

10th grade Healthy Lifestyles Post Test

Review Sheet

## Health vs. Skill Related Fitness

F.I.T is an acronym for frequency, intensity, and time.

The health related fitness components are cardiovascular fitness, muscular strength, muscular endurance, flexibility, and body composition.

The skill related fitness components are balance, coordination, speed, power, agility, and reaction time.

To overload a cardiovascular fitness workout you would increase the intensity, time and/or frequency.

An activity which raises your heart rate into the target heart rate zone for at least 15-20 minutes can be considered a cardiovascular activity.

## Muscular Strength & Muscular Endurance

While working out, a set refers to a group of repetitions.

A repetition is defined as completing the full range of motion of an exercise for a specific number of consecutive times.

A standard Olympic bar weighs 45 pounds.

The appropriate amount of time to allow for recovery before working out the same muscle group is 48-72 hours.

While working out to improve *muscular endurance* you should complete sets of repetitions in the range of 8-15.

While working out to improve *muscular strength* you should complete sets of repetitions in the range 3-6.

## Flexibility

The major benefits of flexibility are: reduce the risk of injury and to improve the range of motion around various joints.

Flexibility is defined as the ability of the joints of the body to move through their full range of motion.

You should stretch to help prevent injury as a warm-up and cool down.

## CPR

The ratio of compressions to breaths in adult CPR is 30:2.

The depth of compressions on adult CPR is a least 2 inches.

Signs of a heart attack include: chest pain, nausea, shortness of breath, light headedness, cold sweats.

The most important aspect of CPR is the compressions.

Wappingers Central School District
10th grade Healthy Lifestyles Post Test
Review Sheet

Cardiovascular-

Any multiple of 60 is an acceptable way of measuring your pulse in Beats Per Minute

.

The two most common places to take your pulse rate are your neck and wrist.

Your maximum heart rate is calculated by subtracting you age from 220.

The MINIMAL amount of time you should maintain you pulse in the target heart rate zone to achieve optimal cardiovascular fitness benefits is 15-20 minutes.

Any activity which raises your heart rate into the target heart rate zone for at least 15-20 minutes can be considered a cardiovascular activity.

Body Composition-

A body fat analyzer measures body fat percentage and BMI.

Well developed muscles are a characteristic of a mesomorphic body type.

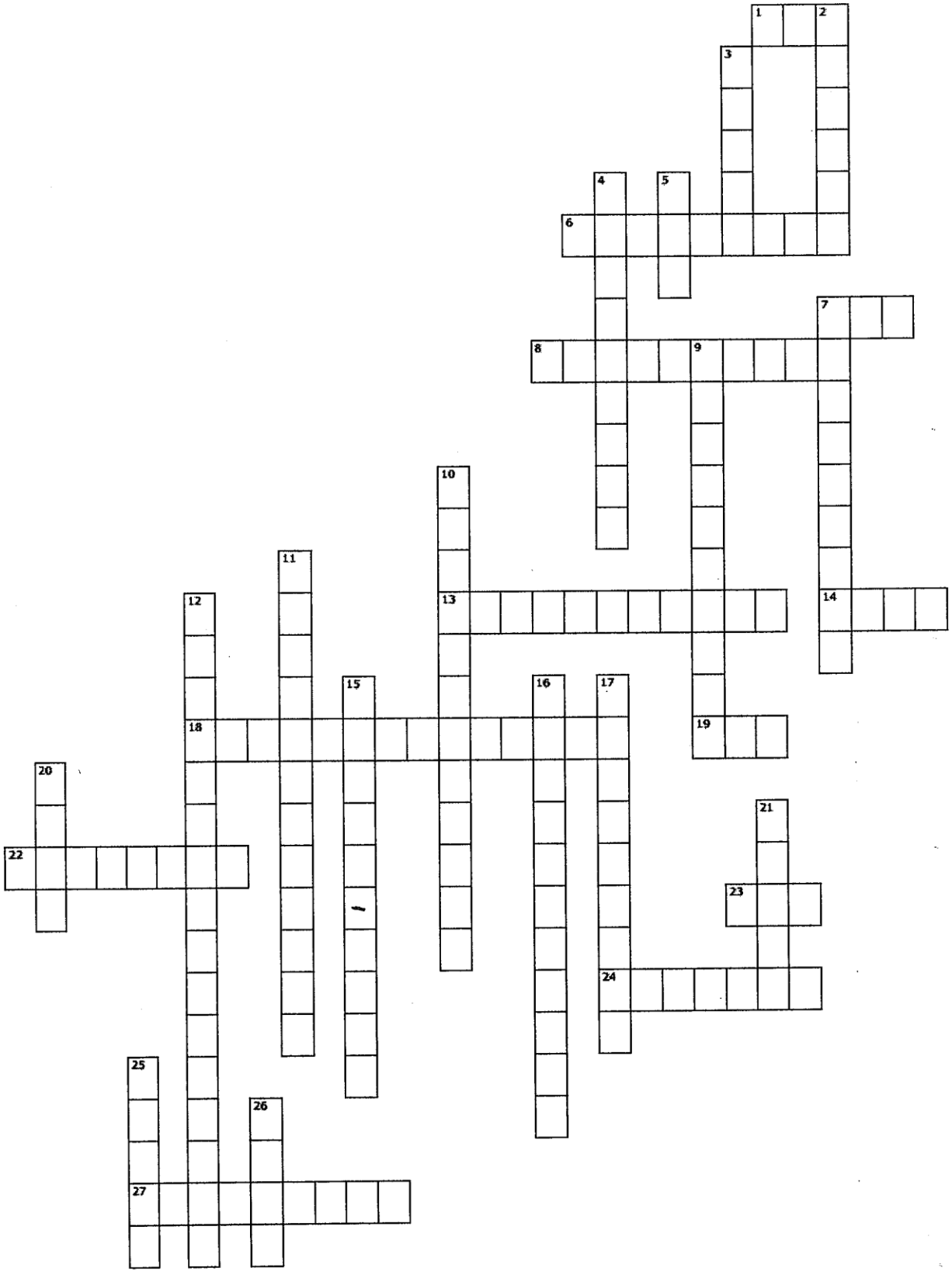
The most accurate method for measuring body fat is under water weighing.

Height and Weight are two components used to determine a person's BMI.

FEMALE Body Fat Classifications
Essential Fat: 10-12%
Athletic: 14-20%
Fitness: 21-24%
Acceptable: 25-31%
Obese: 32% or higher

MALE Body Fat Classifications
Essential Fat: 2-4%
Athletic: 6-13%
Fitness: 14-17%
Acceptable: 18-25%
Obese: 26% or higher

# Untitled



## Across

**1.** a group of repetitions

**6.** how hard you exercise

**7.** 220-age (abbr)

**8.** body typing

**13.** gradually increasing overload

**14.** chest muscle

**18.** One of the components of health related fitness that works out the heart and lungs

**19.** zone you should try to achieve during exercise (abbr)

**22.** making a muscle work harder than normal

**23.** this machine is used along with CPR

**24.** this tool measures your body fat %

**27.** tall, thin, and small boned

## Down

**2.** _____:2 is the ratio of compressions to breaths

**3.** large muscle group that includes the four prevailing muscles on the front of the thigh.

**4.** short,stocky, high % of body fat

**5.** number of times you do a full range of motion of an exercise

**7.** athletic build

**9.** weighing more than the height/weight chart recommends

**10.** most important part of CPR

**11.** integrates hand/foot movements

**12.** one of the components on health related fitness that deals with lifting heavy weights

**15.** the 7 foot bar weighs _____ lbs.

**16.** range of movement possible at various joints

**17.** how often you exercise

**20.** # of cycles in CPR before rechecking for signs of breathing

**21.** 15% above your recommended body weight

**25.** _____ curl in the weight room

**26.** how long you exercise

# Glossary

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**Aerobic Exercise-** activities which force the body to handle large amounts of oxygen for a period of time (ex. jogging, swimming, and biking).

**Agility -** The ability to change the position of your body quickly and to control your body‘s movement.

**Anaerobic-** Activities performed where pace uses oxygen faster than the body can replenish it. (ex.sprinting, power lifting, boxing).

**Anorexia**- An eating disorder that makes people lose more weight than is considered healthy for their age and height.

**Atrophy –** the shrinking of muscle. Muscular atrophy generally begins approximately 48 hours after lifting.

**Balance-** The body‘s ability to maintain an upright posture while standing still or moving.

**Body Composition-** Relative percentage of muscle, fat, bone and other tissues

**Body Image-** The way a person sees his or her physical self.

**Bulimia**- An illness in which a person binges on food or has regular episodes of overeating and feels a loss of control. The person then uses different methods, such as vomiting, to prevent weight gain.

**Cardiovascular Fitness-** ability of the circulatory and respiratory systems to supply oxygen to muscles during exercise.

**Coordination**- The ability to use your senses together with your body parts or to use two or more body parts together.

**Fast Twitch Muscle Fibers (White Muscle Fibers) –** Muscle fibers that contract at a fast rate and have great strength, anaerobic, fatigue quickly but are more explosive.

**Flexibility**- range of movement possible at various joints.

**Genetics-** Related to genes and the science of heredity. How the characteristics of living things are transmitted from one generation to the next.

**Health Related Fitness**- factor related to how well the systems of the body work.

**Lactic Acid –** fills the muscles after lifting. Generally associated with the pain and stiffness after working out.

**Maximum Heart Rate-** Pulse in beats per minute that you should not exceed during exercise. (220-age).

**Muscular Endurance** – the ability to repeat muscle movement over a period of time or to hold one contraction for a long period of time.
**Muscular Strength –** the ability of a muscle group to apply maximal force against a resistance one time.
**Overload-** A rule that states that in order to improve fitness, one needs to do more physical activity than one normally does.
**Physical Fitness-** Capacity of the whole body to function at optimum efficiency; determined by the condition of the heart and circulatory, respiratory, and muscular systems, degree of flexibility, and percentage of body fat.
**Power**- The ability to do strength performance at a rapid pace.
**Progression-** A rule that states that the amount and intensity of physical activity needs to be increased gradually.
**Reaction Time-** The amount of time it takes to react to a stimulus.
**Recovery Heart Rate –** Pulse in beats per minute taken at a fixed period of time after exercise has stopped.
**Repetitions (Reps) –** the number of consecutive times you do a lift. (exercise)…dependent on type of workout.
**Resting Heart Rate-** Pulse in beats per minute, when resting from vigorous work or exercise from the previous four hours, not eating for the previous two hours and sitting or lying down for the previous thirty minutes.
**Sets –** A group of repetitions (reps); each set of reps is followed by a rest period before another is performed.
**Skill- Related Fitness-** Factors related to being a better athlete.
**Slow Twitch Muscle Fibers (Red Muscle Fibers) –** Muscle fibers that contract at a slow rate and have great endurance, aerobic nature, fed by a large blood supply.
**Specificity-** A rule that states that specific types of exercise improve specific parts of fitness or specific muscles.
**Speed-** The ability to perform a movement or cover a distance in a short period of time.
**Target Heart Rate –** Pulse in beats per minute that you should reach during your workout to achieve the most benefit. 75% of your Maximum Heart Rate (MHR x .75).

## Healthy Lifestyles (10th Grade) Grading Policy

(5 points earned daily for 100% of grade):

**Non-notebook days**

1 point = Attending class on time
1 point = Changed for class in proper attire on time
1 point = Demonstrated Skill Level
1 point = Cooperation
1 point = Participation and Effort in class

**Notebook-usage days**

1 point = Attending class on time
2 points = Changed for class in proper attire; On time
2 points = Possession & correct participation in notebook

**Students are responsible for having their notebook at every class
UNLESS THE ARE NOTIFIED BY THEIR TEACHER**

## Additional Grading Information:

**Due to NYS changing policies in regards to education, testing **may be required** and applied towards the student's grade as per discretion of the Physical Education department**

*Students who bring any type of electronic device to class (unless authorized by the teacher) will lose credit for that class session. The device will be collected and handed into administration following the class*

*Students who receive referrals during the class or who need to be removed from the class due to disciplinary issues will lose all credit for that class session*

| Date | | | | | | | | | | | | 5 Weeks | | | | | | | | | | | | Tests | Essay | Extra Credit | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Q2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Q3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Q4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |