Fitness Information- You do not need to print this, use it as a study guide to complete your HW and Test.

Target Heart Rate (Training heart rate)

The target heart rate zone (THR) is a heart rate range in which an athlete would want to work at to achieve optimal fitness. The most common way to calculate your THR is by finding percentages of your maximum HR (MHR). The easiest method is to take:

\[ 220 - \text{your age} = \text{maximum heart rate} \]

Take your MHR times it by:  
0.6 to get 60% MHR  
0.85 to get 85% MHR

There are more accurate methods to determine your THR, but they are much more complicated. This method will give you a range to work with for PE class.

Here is an example:

\[ 220 - 35 = 185 \text{ (The 35 is my age)} \]
\[ 185 \times 0.6 = 111 \]
\[ 185 \times 0.85 = 157 \text{ (rounded)} \]

My target heart range is between 111 and 157.

Keep in mind that everyone has a different goal in mind for fitness. Why you are exercising and what you want to accomplish depends on how “hard” you push yourself to reach different levels of THR.

50-60% MHR = Strenuous daily exercise  
60-70% MHR = fat burning zone  
70-80% MHR = improves endurance  
80-95% MHR = competitive training, to increase anaerobic threshold

Fitness Vocabulary- Be familiar with these terms

Aerobic: With the use of oxygen. This level of exercise can be sustained for a long period of time.

Anaerobic: Without the use of oxygen. Exercising at a high level of strain. This can be sustained for a short burst of time.

Heart rate: Number of beats per minute.

Resting heart rate: Number of beats per minute taken after waking up.

Reps (Repetitions): Number of times that a weight is lifted during a set.

Set: Number of repetition groupings.

Five components of Fitness:

1. Cardio-respiratory Endurance – Also referred to as aerobic endurance.
3. Muscular strength- Ability of a muscle to lift an object once.
4. Flexibility- Ability to stretch or move through a joints range of motion.
5. Body Composition- Lean body mass vs. fat mass

Can weight training enhance all five components? YES!
**Benefits of Exercise:**

1. Lowers your blood sugars  
2. Lowers your blood pressure  
3. Lowers your cholesterol  
4. Lowers your resting heart rate  
5. Reduces your stress level  
6. Reduces your body fat  
7. Increases tone and muscle mass  
8. Increases your metabolic rate  
9. Increases your flexibility  
10. Adds “Quality” years to your life

**Body Mass Index:** Your BMI is a calculated range. The calculations are not accurate for very muscular/athletic people, pregnant women or kids. The five ranges are:

- Severely underweight (BMI less than 16)  
- Underweight (BMI 16-18)  
- Healthy (BMI 19-24)  
- Overweight (BMI 25-29)  
- Obese (BMI 30+)

To find your BMI: Multiply your weight in pounds by 703; divide that result by your height in inches squared.

For example:  
703 x 170 =119510 (weight of 170 times 703)  

(5’6’’ = 66 inches)  
66 x 66 = 4356 (height in inches squared)  
119510 divided by 4356 equals **27.43**

This person has a BMI of 27, this is considered “overweight”.

**Muscles- Know the following muscles and organs and which fitness station assists in targeting the area.**

<table>
<thead>
<tr>
<th>Muscle</th>
<th>Body part</th>
<th>Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pectorals (pecs)</td>
<td>Chest</td>
<td>Bench Press, Incline Bench</td>
</tr>
<tr>
<td>Abdominals (abs)</td>
<td>Stomach</td>
<td>Sit up station</td>
</tr>
<tr>
<td>Biceps</td>
<td>front of arm</td>
<td>dumb bell/preacher/concentration curls</td>
</tr>
<tr>
<td>Triceps</td>
<td>back of arm</td>
<td>Tricep pull down/kickbacks/extensions</td>
</tr>
<tr>
<td>Quadriceps (quads)</td>
<td>Front of thigh</td>
<td>Leg extension/press</td>
</tr>
<tr>
<td>Hamstrings</td>
<td>Back of thigh</td>
<td>Squats, leg curls</td>
</tr>
<tr>
<td>Deltoids</td>
<td>Shoulder</td>
<td>Shoulder press, laterals</td>
</tr>
<tr>
<td>Latissimus Dorsi (lats)</td>
<td>Back</td>
<td>Lat Pull down, rows, seated rows, bicep pulldown</td>
</tr>
<tr>
<td>Trapezius (traps)</td>
<td>Upper back/neck</td>
<td>Shrigs</td>
</tr>
<tr>
<td>Heart</td>
<td>Inside chest</td>
<td>Bike, elliptical, treadmill, row machine</td>
</tr>
<tr>
<td>Gastrocnemius</td>
<td>Calf</td>
<td>Leg press</td>
</tr>
<tr>
<td>Forearm</td>
<td>Front and back lower arm</td>
<td>Wrist Curls, hammer curls, roll ups</td>
</tr>
</tbody>
</table>

**Weight Training**

5 sets of 1-5 reps will focus on improving strength

3-5 sets of 6-10 reps will focus on improving muscle size

3 sets of 12-15 reps will focus on muscle toning and definition
Muscles Diagram

- Trapezius
- Deltoid
- Pectoral
- Bicep
- Tricep
- Latissimus Dorsi
- Abdominals
- Gluteus Maximus
- Quadricep
- Hamstring
- Gastrocnemius

***The pictures in this diagram come from www.ama-assn.org/.