

PE Weight Room Stations and Major Muscle Groups Used

***Stations are in clockwise order beginning with the Multi-Use Upper Body Machine, found to the right of the outside door to the PE Weight Room.**

***Though each exercise can train multiple muscle groups, only the major muscles or major muscle groups trained are listed below.**

- (1) Arm Curls:** Biceps
- (2) Front Shoulder Raises:** Anterior Deltoids
- (3) Shrugs:** Trapezius
- (4) Overhead Tri's (OHT's):** Triceps
- (5) Dumbbell Bench Rows:** Rhomboids, Latissimus Dorsi
- (6) Dumbbell Incline Bench Press:** Middle/Upper Pectorals (same station as above)
- (7) Crunches:** Abdominals and Obliques
- (8) Multi-Use Upper Body Machine (Do not need to know this station for final):**
Pull-Ups: Latissimus Dorsi, Biceps, Triceps, Pectorals, Trapezius, Deltoids
Push-Ups: Pectorals, Deltoids, Tricep, Bicep, Latissimus Dorsi
Dips: Deltoids, Triceps, Pectorals, Rhomboids
Knee Ups/Leg Raises: Abdominals and Obliques
- (7) Crunches:** Abdominals and Obliques
- (9) Leg Press:** Quadriceps
- (10) Calf Press:** Gastrocnemius (same machine as above)
- (11) Leg Curls:** Hamstring
- (12) Leg Kick-Back:** Gluteus Maximus
- (13) Cable Chest Press:** Pectorals
- (14) Cable Close Grip Chest Press:** Triceps (same machine as above)
- (15) Pull Downs:** Latissimus Dorsi
- (16) Seated Rows:** Trapezius, Latissimus Dorsi (same machine as above)
- (17) Cable Shoulder Press:** Deltoids
- (18) Back Extensions:** Erector Spinae (spi-nae)
- (19) Push Downs:** Triceps
- (20) Kettlebell Swings (outside):** Hip Flexors

PE Terminology

***For a list of the muscles used (and defined) in PE Course 1 and 2 resistance training, please see the Muscular System Image.**

Scapular Retraction: Retract Scapulas, bring shoulders back toward midline creating a sensation of squeezing the shoulder blades together. Increases strength in muscles surrounding spine and can improve posture. Example: during push-ups, we begin the exercise in resting push-up position (down position), holding scapular retraction to reinforce using our shoulders and staying in proper alignment with our hands, arms, and back.

Universal Athletic Position/Stance (UAP): Stance a human being can take where they can generate the most amount of power with the least amount of strain onto

their being. Beginning position for all athletic activity but can vary from sport to sport. Standing in a quarter squat with feet flat, hips pulled behind the center of gravity, shoulders in front of your knees, the torso is flat at a 45 degree incline, and your weight is evenly distributed through both feet.

Overload Principle: This is probably the most important principle of exercise and training. Simply stated, the Overload Principle means that the body will adapt to the stresses placed upon it. The more you do, the more you are capable of doing. This is how all the training adaptations occur in exercise and training. The human body is an amazing machine. When you stress the body through lifting a weight that the body is unaccustomed to lifting, the body will react by causing physiological changes to be able to handle that stress the next time it occurs. This concept is similar in cardiovascular training. If you ask the heart, lungs and endurance muscles to do work not previously done, it will make changes to the body to be able to handle that task better the next time. This is how people get stronger, bigger, faster and increase their physical fitness level.

Muscular System: The bodily system that is composed of three kinds of muscle: skeletal muscle, which is attached to bones and allows the voluntary movement of limbs; smooth muscle, which is found in internal organs and aids in the involuntary movements that occur in the circulatory, digestive, excretory, reproductive, and respiratory systems; and cardiac muscle, which forms the powerful walls of the heart. See diagram under Course 1 Essential Documents for more information.

Skeletal System: The framework of the body, consisting of bones and other connective tissues, which protects and supports the body tissues and internal organs. The human skeleton contains 206 bones, six of which are the tiny bones of the middle ear (three in each ear) that function in hearing. The largest bone in the body is the thighbone, or femur. See diagram under Course 1 Essential Documents for more information.

Repetitions: A training exercise that is repeated, especially a series of repeated raisings and lowerings of the weight in weight training.

Set: A fixed number of repetitions of a particular bodybuilding exercise.

Exertion: Physical or mental effort.

Concentric Contraction: The shortening of a muscle and joint angle (dynamic).
Example: bicep curls

Eccentric Contraction: The lengthening of a muscle and joint angle (dynamic).
Example: leg press

Isometric Contraction: Strength training in which the joint angle and muscle length do not change during contraction (static). Can help in maintaining muscle strength and rehabilitation. Example: muscles of the hand and forearm grip an object.

Plyometrics: Sometimes known as "jump training" or "plyos." Exercises in which muscles exert maximum force in short intervals of time, with the goal of increasing both speed and power. Example: jumping or rebounding a basketball

Anaerobic: Relating to, involving, or requiring an absence of free oxygen. Relating to or denoting exercise that does not improve or is not intended to improve the efficiency of the body's cardiovascular system in absorbing and transporting oxygen. Example: weight lifting.

Aerobic: Relating to, involving, or requiring free oxygen. Relating to or denoting exercise that improves or is intended to improve the efficiency of the body's cardiovascular system in absorbing and transporting oxygen. Example: mile run.

Dynamic Stretches: Use rhythm and motion similar to those that an athlete undertakes during exercise or game play and effectively simulate a performance experience. Can improve blood circulation as well. Involves focusing on gradual increases as you reach into the stretch without jerking motions.

Static Stretches: Can improve mobility and range of motion and help the body cool down. Usually performed after exercise. Requires you to stretch as far as you can and hold that stretch.

Cardiovascular: Relating to the circulatory system, which comprises the heart and blood vessels and carries nutrients and oxygen to the tissues of the body and removes carbon dioxide and other wastes from them.

Resistance Training: Any exercise that causes the muscles to contract against an external resistance with the expectation of increases in strength, tone, mass, and/or endurance.

Gymnastics: Naked exercise (without outside resistance). Physical exercise designed to develop strength, agility, and coordination. Example: walking squats, walking lunges, planks, push-ups

The Trinity of Physical Education: Scapular Retraction, The Lunge, and The Squat (Jinguji, 2008).

5 Components of Fitness:

1. **Cardiovascular Endurance:** Cardiovascular endurance refers to the ability of your heart and lungs to work together to fuel your body with oxygen. Examples: The mile run, swimming, cycling.
2. **Muscular Strength:** Muscle strength refers to the amount of force a muscle can exert, in a single effort. Examples: Weight training and push-ups.
3. **Muscular Endurance:** Muscle endurance refers to the ability of a muscle to perform in a continuous effort without fatigue. Examples: Jumping rope, cycling, and athletic team practice.
4. **Flexibility:** The ability of each joint to express its full range of motion. Examples: Stretching individual muscles or performing exercises such as the lunge or the sit and reach.
5. **Body Composition:** The amount of body fat you have, versus the amount of lean muscles, bones and organs. There are several tests that can be used to measure body composition including calipers. Body Composition can be improved through regular daily exercise, eating a healthy diet, and drinking water.

Partner Resistance Band Warm-Up: Activating Your Muscles

(All warm-ups should be completed in a controlled manner)

1. Lateral Walk:

Standing on band with feet shoulder width and step 6 inches to right and left

2 steps to the right

2 steps to the left

-10 times each side then switch with partner

2. Pull Aparts:

In lunge position with band in both hands

Pull band apart band in both directions

-5 times each side or 10 times in all then switch with partner

3. Front Shoulder Raise:

Stand on band with feet shoulder width or in lunge position under front foot

Pull band up to chest high with arms fully extended

-10 times then switch with partner

4. Lunge Squat/Standing Lunge:

Stand with band under front foot in lunge position

Hold band to front of body or under palms

Perform standing lunge

-10 times each leg then switch with partner

Bands:

Red: Small, Approximate Resistance of 15-35 lbs.

Black: Medium, Approximate Resistance of 35-55 lbs.

Purple: Large, Approximate Resistance of 50-75 lbs.