DEFINITION OF WEIGHT TRAINING: A form of exercise in which muscles are repeatedly contracted against a weight to reach fatigue. Weight training reshapes the body and builds muscle.

BENEFITS OF WEIGHT TRAINING:
1) Allows you to move easier with less risk of injury (muscular strength)
2) Allows you to participate in activities that require movement over a longer period of time (muscular endurance)
3) Raises your metabolism
4) Burns calories – muscle burns more calories even while resting
5) Helps to maintain a healthy body weight

BEGINNING IN YOUR MID-20’s, WE loose ½ POUND OF MUSCLE PER YEAR AND GAIN 1 POUND OF FAT PER YEAR (on average). Weight training can help to stop this natural change in body composition.

THE BEST WAY TO LOSE WEIGHT AND KEEP IT OFF IS BY EATING A HEALTHY DIET AND COMBINING AEROBIC ACTIVITY WITH WEIGHT TRAINING!

PRINCIPLES OF WEIGHT TRAINING:
1) Overload: High intensity. The lifter must continue lifting until the point of exhaustion or failure. This stimulates more muscle fibers to be used.
2) Progression: To systematically increase the stress a muscle endures during an exercise. Progression is achieved by doing any of the following: by increasing the weight, by increasing the number of repetitions performed in one set, by increasing the number of sets, or by decreasing the rest interval between sets.
3) Specificity: Strengthening specific muscles to improve performance in an activity. Examples: strengthening leg muscles by doing squats will help with jumping, strengthening shoulders by doing military press will help with throwing.

WEIGHT LIFTING TERMINONOLGY:
Range of Motion: Moving through the muscle and joint’s full range.
Aerobic Exercise: A continuous activity that relies on oxygen for energy. Heart rate must be increased to 60-80% of your maximum heart rate and activity must continue at least 30 minutes. Burns fat, builds endurance and conditions the cardiovascular system (examples: jogging, biking).
Anaerobic Exercise: Start and stop, high intensity exercise that burns glycogen for energy, instead of oxygen (example: weight lifting).
Failure: Being unable to complete a move because of fatigue.
Repetition: Each individual movement of an exercise/lift.
Resistance: The actual weight against which a muscle is working.
Rest Interval: A pause between sets that allows the body to recover and prepare for the next set of exercises.
Set: A cluster of repetitions, performed without rest.
Hypertrophy: The increased size of a muscle as a result of high intensity weight training.
Atrophy: The decrease in muscle size and strength due to inactivity.
Intensity: The amount of force – or energy – you expend during a workout.
Antagonistic muscle groups: Muscles that work in opposition to each other (tricep and bicep, hamstring and quadricep)
**Brookfield East Physical Education**

*Flexion:* A decrease in a joint angle.
*Extension:* An increase in a joint angle.
*Contraction:* Increase in muscular tension.
*Relaxation:* Decrease in muscular tension.
*Testosterone:* The hormone responsible for the increase in the size of muscle tissue.
*Anabolic steroids:* Synthetic productions of testosterone.
*Inhale:* Breathing that takes place during the recovery or negative part of the lift.
*Exhale:* Breathing that takes place during the exertion or the positive part of the lift.
*Eccentric contraction:* Negative part (recovery) of the lift, muscles lengthen during resistance.
*Concentric contraction:* Positive part (exertion) of the lift, muscles shorten during resistance.
*Isotonic exercises:* Lifts that go through a ROM with the exact same weight (resistance).
*Isometric exercises:* Lifts that go through no ROM with a constant resistance.
*Isokinetic exercises:* Lifts that go through a ROM with a varied weight (resistance) to maintain a high muscle tension.
*Muscular strength:* The maximum amount of force that can be exerted.
*Muscular endurance:* The maximum amount of force that can be exerted over a period of time.
*Core lifts:* Lifts that involve the major muscle groups, generally working the belly of the muscle (squats, bench press, power cleans).
*Auxiliary lifts:* Lifts that involve the smaller muscles, generally working the ends of the muscles.

**WEIGHT ROOM RULES:**

1) Always have a spotter for multi-joint lifts (e.g. Bench, Squat).
2) Replace weight plates to the racks after you have completed your lifts.
3) Additional lifts may only be done if approved by your instructor.
4) Do not perform the same lifts 2 days in a row. Allow 48 hours between similar workouts.

**COMMON WEIGHT TRAINING PROGRAMS:**

**Strength Training:** Higher intensity, lower repetitions.
Typically 4-6 sets with 2-6 repetitions in each set.
Weights should be set at about 85% of your maximum ability (1 rep max).
Most productive program for gains in muscle girth.

**Power Training:** Slightly lower weight, increased repetitions.
3 sets with 8-12 repetitions in each set.
Weights should be set at about 70% of your maximum ability.
Builds strength, endurance and moderate muscle growth.

**Endurance Training:** Used to sustain activity over long periods of time.
Tones your body and can be used in a circuit for a great aerobic workout.
2-3 sets with 12-25 repetitions per set.
Weights should be set at 50-60% of your maximum ability.