



Mokena Junior High

Health and Physical Education Resource Guide

8th Grade

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PHILOSOPHY OF THE HEALTH AND PHYSICAL EDUCATION DEPARTMENT

The Health and Physical Education Department of District 159 believes that our primary goal is to enhance the quality of life of our students. The focus is to encourage our students not to just avoid sickness, but to achieve wellness. Wellness is a state of healthy balance whereby an individual makes sound decisions regarding exercise and fitness, nutrition and diet, rest and relaxation and health habits. A person's lifestyle, or the way he or she chooses to live, has the greatest effect on health. Statistics show that seven out of the ten leading causes of death are related to personal habits and behavior. Thus, in order for wellness to be achieved, responsible decision-making must take place. This will include decisions about lifestyle, education, career options, and marriage. Other more impulsive choices may include decisions about whether or not to use alcohol, drugs, or tobacco.

We, as Health and Physical Education teachers, believe it is our responsibility to develop in our students an awareness of the benefits of a healthy lifestyle, so they can make responsible decisions and be able to consider the consequences of those decisions. Wellness, then, is self-responsibility for health and using decision-making skills to make rational lifestyle choices.

DEPARTMENT EXPECTATIONS

Hello and welcome to a new school year! We are looking forward to having you in class. If you follow the expectations listed on this sheet, we will have a successful year!

EXPECTATIONS:

The state of Illinois requires daily physical education for students in grades K-12. Therefore, students must:

- Dress in their PE uniform on a daily basis.
- Participate in class on a daily basis.
- Wear appropriate athletic shoes.
- For safety, remove all forms of jewelry (except small post/stud earrings).
- Gym suits cannot be altered (i.e.: no writing other than your name in the designated area/no homemade pockets in the gym shorts, etc.).

RULES:

- Be respectful to your teacher and classmates.
- No candy or gum chewing.
- Equipment should not be touched until directed by teacher.
- Be in your squad position before the bell rings.
- Use appropriate language at all times.
- Do your own work on homework and tests.
- Keep all your belongings locked up when you are not present.
- Backpacks and other large bags, food, drinks, glass/plastic bottles, and aerosol perfume sprays are not allowed in the locker room.
- Gym suits are to be brought home on the last day of the school week to be washed and returned the first day of the following week.

*Failure to follow these expectations may result in grade points taken away, communication with parents, and/or detentions being written.

*Locks are **your** responsibility. Keep locks locked at all times and do not give out your combination to anyone. If you lose your lock, check in the PE offices to see if it is in the lost and found. You may purchase a new lock if you cannot find the one that was issued to you for \$7.00. Any lost or stolen items are not the responsibility of Mokena Junior High School.

GRADING POLICIES

Students will be graded on the following categories in class, which will each be weighted individually. The weighted grade is subject to change each quarter depending on the units being taught. We will also have “cardio days,” which include lessons that focus on cardiovascular endurance. These particular lessons will be worth a set number of points, and all of the students will be expected to participate. Cardio days can only be made up by running after school.

PARTICIPATION/COOPERATION (5 TOTAL POINTS DAILY)

Participation points are awarded for both warm-ups and the activity portion of the lesson. Solely being present does not mean all points will be rewarded. Cooperation points are awarded for cooperating with teachers and peers. Arriving late to class will result in the loss of one point. Students lose points with this category, for example, when walking while they are supposed to be running, sitting out, refusing to play the assigned game, etc. The amount of points deducted depends on the severity of the lack of participation.

BEHAVIOR (2 POINTS DAILY)

Behavior points are awarded for students who follow the expectations and rules on this syllabus. This especially includes respecting teachers and other students. Students who disrespect the staff or students may lose one or both points for the day. The amount of points deducted depends on the severity of the misbehavior.

DRESS (3 POINTS DAILY)

Deviation from the dress requirement (appropriate shirt, shorts, athletic shoes, no jewelry, and uniform worn appropriately), will result in loss of points. A referral may be written for failing to dress in your gym uniform. Wearing half of the uniform will result in the loss of one point. If no part of the gym uniform is worn, three points will be deducted.

TESTS/WRITTEN WORK:

Written work will vary in point value based on the particular unit. Work turned in one day late will result in half credit. Any work turned in later than one day will result in a zero.

STUDENTS WITH MEDICAL NOTES:

These come in two forms: parent and doctor. A parent note is acceptable for a 1, 2, or 3 day period. The note must be dated and state the amount of time the student will be out and why. Dressing for class is still required and an alternative assignment will be given for that time. Failure to dress or complete the alternate assignment will result in a zero for the day. If a student needs to be out for more than three days, a doctor’s note is required. Students will still be expected to dress in their PE uniform when possible and an alternative assignment will be given.

STUDENT ABSENCES:

In order to give participation/cooperation points on days when a student is absent, he or she will be given the option to write an article review or come in after school and run a mile. Absent make-ups must be made up before the end of each quarter. If you would like an alternative assignment, you can get one from us or you can find them outside of the athletic office.

PHYSICAL EDUCATION EXPECTATIONS

I have received a copy of the physical education class expectations.

I have read and understand these expectations.

I understand that I am responsible for my PE handbook and that if I misplace it, I need to purchase another one.

**Any lost or stolen items are not the responsibility of
Mokena Junior High School.**

Print Student Name

Class Period _____

Student Signature

Date

Parent Signature

Date



STUDENT OUTCOMES OF THE PHYSICAL EDUCATION PROGRAM

STUDENTS WILL BE ABLE TO:

1. Demonstrate competence in a variety of manipulative, locomotor, and non-locomotor skills.
2. Demonstrate competence in combinations of manipulative, locomotor, and non-locomotor skills alone and with others.
3. Demonstrate competence in many different forms of physical activity, including dance, sport, and games.
4. Demonstrate proficiency in a few forms of physical activity.
5. Participate in vigorous activity at least three times a week.
6. Participate regularly in lifetime physical activities.
7. Experience the process of assessing, developing, and maintaining physical fitness.
8. Design safe, personal programs that result in physical fitness.
9. Explain the benefits associated with regular participation in physical activity.
10. Recognize the risk and safety factors associated with regular participation in physical activity.
11. Know how to select and become involved in physical activities.
12. Be able to apply movement concepts and principles to the development of motor skills.
13. Describe how to determine, develop, and maintain physical fitness.
14. Understand that personal health involves more than being physically fit.
15. Know the rules, strategies, and appropriate behaviors for selected physical activities.
16. Understand that participation in physical activity can lead to cross-cultural and international understanding.
17. Understand that physical activity provides the opportunity for enjoyment, communication, and self-expression.
18. Value the relationships with others that result from participation in physical activity.
19. Value the role that regular physical activity plays in the pursuit of lifelong health and well-being.
20. Value the feelings that result from regular participation in physical activity.

A PHYSICALLY EDUCATED PERSON...

HAS sufficient skills to perform a variety of physical activities.

PARTICIPATES regularly in physical activity.

IS physically fit.

KNOWS the benefits, costs, risks, and obligations of physical activity involvement.

VALUES the effects of regular physical activity in maintaining a healthy lifestyle.

PHYSICAL EDUCATION CONTRIBUTES TO A CHILD'S OVERALL HEALTH BY INCREASING OR IMPROVING:

- Cardiovascular endurance
- bone development
- muscular strength and power
- posture muscular endurance
- skillful movement flexibility
- mental alertness
- Weight regulation
- active lifestyle habits constructive
- use of leisure time

QUALITY PHYSICAL EDUCATION

QUALITY PHYSICAL EDUCATION HAS THE FOLLOWING ELEMENTS:

- Aerobic exercise designed to improve children's cardiovascular fitness (at least three times a week for 20 minute periods);
- Exercise to improve strength and flexibility (three times or more per week);
- Sports, games, dance, and other activities that teach coordination and motor skills;
- Instruction in how physical activity can improve children's personal health and well-being;
- Experiences that will improve the opportunity for positive attitudes and values to develop.

QUALITY PHYSICAL EDUCATION OFFERS THE FOLLOWING BENEFITS:

Physical well-being: decreased risk of heart disease, physical fitness, stronger bones, weight regulation, healthy, active lifestyles

Mental well-being: higher academic performance, increased interest in learning, better judgment, self-discipline, goal setting

Psychological benefits: positive attitudes toward physical activity, improved self-confidence and self-esteem, outlet for stress, strengthened peer relationships, reduced risk of depression, healthier lifestyles

HEALTH-RELATED PHYSICAL FITNESS

WHAT IS PHYSICAL FITNESS?

Being physically fit means having the strength and endurance to carry-out every day activities without undue stress and still have enough energy to participate in leisure activities and be able to deal with an unexpected emergency. When you are physically fit, your heart, lungs, and muscles are strong and your body is firm and flexible. Your body weight and percent of body fat are also within a desirable range.

District #230 Physical Education programs have developed a Health-Related Physical Fitness Test battery in conjunction with the American Alliance of Health, Physical Education, Recreation and Dance and the President's Council of Physical Fitness and Sports. The testing program places a major emphasis on health-related physical fitness including Cardiovascular Endurance, Muscular Endurance, Muscular Strength, Flexibility and Body Composition.

PHYSICAL FITNESS COMPONENTS AND THEIR RELATIONSHIP TO HEALTH

Cardiovascular Endurance: The greatest single cause of death in the United States is coronary heart disease (CHD). CHD usually presents warning signs in the form of the following risk factors, such as elevated blood lipids, hypertension, and disturbances in heart rhythms. These risk factors have been shown to be related to people's lifestyles. Stress, cigarette smoking, consumption of fat, and physical inactivity are lifestyle habits that have a direct tie to CHD mortality. According to a recent report from the Surgeon General, lack of regular exercise and physical activity contribute to the development of other CHD risk factors.

Research suggests that by engaging in regular exercise and physical activity that improves the cardiovascular system (aerobic capacity), individuals can reduce many risk factors associated with coronary heart disease. This is especially true for young people. There is strong evidence that the onset and rapid development of CHD can begin during youth, and may eventually become irreversible.

Cardiovascular Endurance is evaluated by performing the Mile Run for time outdoors or the Pacer test indoors. Aerobic (another name for cardiovascular: cardio = heart, vascular = veins and arteries) activities are incorporated throughout the physical education curriculum in order to improve this component. These activities include walking activities, jogging, running, jumping rope, distance swims, stationary bicycling, aerobic dance, step aerobics, basketball, team handball, touch football or any other activities which utilize the large muscles of the legs and elevates the heart rate.

Cardiovascular Endurance is defined as the ability of the heart and lungs to provide an adequate supply of oxygen to the body over an extended period of time. "Because physical activity is so directly related to preventing disease and premature death and to maintaining a high quality of life, we must accord it the same level of attention that we give other public health practices that affect the entire nation."

...Audrey F. Manley, Former Acting Surgeon General

Muscular Endurance: Weak abdominal muscles can promote health-related problems by contributing to a misalignment of the spine. When weak abdominal muscles add strain to the lower back muscles, low back problems can result. At the present time in the United States, eight out of ten individuals seek medical care for low back pain! Research studies conducted to investigate ways to provide relief to people who suffer from back pain have demonstrated that improving the endurance of the abdominal muscles can decrease the incidence and severity of the pain. Muscular Endurance is evaluated in our program in two ways, the one minute Partial Curl test and the Push-Up test. Having muscular endurance indicates that your muscles are strong enough to move for long periods of time and can complete numerous repetitions. In our Physical Education program each day, during the warm-up phase of each lesson, students develop muscular endurance by participating in sets of abdominal exercises (including crunches, ab curls and ab twists) and push-ups (including wide base, regular base and tricep push-ups) in increasing numbers (progressive overload) as the time passes during each semester.

Muscular Endurance is defined as the ability of the muscles to sustain repeated productions of force at low to moderate intensities over an extended amount of time.

Muscular Strength: Upper body strength is important for individuals to perform daily activities and tasks such as taking out the trash, moving furniture or appliances, or changing a tire and lifting, pulling, or pushing objects. Many tasks involve use of the upper body and limbs. In an emergency a strong individual has a better chance of avoiding serious injury than a weak person. In many cases upper body strength can make the difference between a serious injury and escaping harm.

Muscular Strength is evaluated in our physical education program by the student either performing the flexed-arm hang or the pull-up test. The female students usually are evaluated by completing the flexed-arm hang and the male students the pull-up test. However, there are norms (averages) available for each of these evaluations for both genders. If a student can perform numerous repetitions in completing these tests, then they are demonstrating muscular endurance rather than strength. If this is the case the instructor may choose to use a hand dynamometer to measure hand strength or have the student perform a maximum lift (1 time repetition) in the bench press, while assigned to the weight room, in order to get a true measure of strength. In order to evaluate this test, use the data listed below:

Upper Body Strength = 1 rep max in pounds divided by body weight in pounds

	<u>Males</u>	<u>Females</u>
Excellent	greater than 1.26	greater than .78
Very Good	1.17 - 1.25	.72 - .77
Good	.97 - 1.16	.59 - .71
Fair	.88 - .96	.53 - .58
Poor	less than .87	less than .52

Muscular Strength is defined as the ability of the muscles to produce force at high intensities over short intervals. In our program, strength is developed through daily efforts in performing pull-ups before attendance is taken. Students are encouraged to practice these strength training exercises with a partner and help each other work on negative pull-ups for support. Each student is also enrolled in a weight training unit each year and is encouraged to work on the same muscles designed to improve upper body strength (including lat pull-down exercises which are the prime movers in these tests).

Flexibility: Most Americans will, at one time or another, suffer back problems. Approximately 80% of these low back problems are due to weak and/or tense muscles. Many daily activities place a great deal of strain on these muscles. Physical inactivity can also contribute to the risk factors that promote back problems. This means that these problems can be reduced or limited through improved physical fitness. Physical inactivity contributes to a loss of flexibility for the lower back and the hip flexors. Sitting for long periods of time promotes a sedentary existence which will result in a loss of flexibility. Individuals with a sedentary lifestyle who perform occasional physical labor are at high risk for developing back problems. Physicians prescribe specific trunk and thigh flexibility exercises - stretching - for their patients with lower back problems, supporting the value of stretching exercises to prevent low back problems.

Flexibility is evaluated by having students perform the sit and reach test, which measures the flexibility of the hamstring muscles and the lower back. Flexibility is practiced each day by having students perform appropriate stretching exercises during the pre-activity warm-up. The only way to improve flexibility is to have the participants utilize “static stretching” each day in class. This type of stretching incorporates slow, relaxed stretching, with a comfortable breathing pattern so that, over time, the individual learns how to stretch properly.

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

Body Composition: The human body can be divided into two parts: lean weight (muscle, bone, and internal organs) and fat weight. For good health, the body should maintain a proper ratio of one to the other. Obesity is an excessive accumulation of fat weight. Low levels of activity, resulting in fewer calories used than consumed, contribute to the high incidence of obesity in the United States today. Young people are more obese now than ever before. Obesity is associated with many risk factors of coronary heart disease, stroke, and diabetes. Reversal of these risk factors can be achieved by reducing an individual’s total body fat. Exercise along with proper diet by observing good nutritional principles relating to lowering personal consumption of saturated fats, sweets, and excessive calories are important lifestyle changes that individuals must make. Body Composition is discussed as a component of physical fitness and students are not required to be evaluated in this area, since it is a personal matter. If a student chooses to be evaluated, a physical education instructor will use **Futrex**, a body fat calculator, to measure his/her body composition. This machine calculates the student’s percentage of body fat. Another method used to evaluate this is **Body Mass Index (B.M.I.)**. The department has charts to approximate a person’s body mass index which correlates to body composition. The concept of body composition is discussed in detail during the Freshmen Wellness Concepts curriculum, a three week unit regarding the guidelines for a healthy lifestyle.

Body Composition is defined as the division of total body weight into two parts: lean muscle mass and fat weight.

TO IMPROVE PHYSICAL FITNESS - FOLLOW THE PRINCIPLES OF EXERCISE:

Progression: Gradually increase how hard, how long, and how many times you do an exercise over a period of time. It takes six to eight weeks for physical improvement to take place. For instance, don't try to go from doing 25 sit-ups to 50 overnight, but add a few more every week until you've reached your goal.

Regularity: Be regular with your exercise routine. Set up a regular schedule and work out every day or at least 3 - 5 times per week. Do not take time off for too long because what you don't use, you lose!

Overload: For a muscle to get stronger increased demands must be placed upon the body. This increased stress causes the body to adapt or adjust and consequently an improvement in physical condition will take place. There are 3 ways to increase overload. These include:

1. Frequency - Increasing how often you exercise. The number of times per day or week that an activity is performed can be increased.
2. Intensity -Increasing the level of difficulty of an exercise. You can increase how much is lifted or the speed of a run to be completed.
3. Time - Increasing the length of a training session or the duration of the exercise session.
4. Type - Type of exercise.

Specificity: Exercise is specific. For example, aerobic exercises will not develop flexibility and stretching exercises will not make you stronger. To be flexible, you have to stretch and to be strong you have to make your muscles work hard.

HEALTH RELATED FITNESS TEST GUIDELINES

MOKENA JUNIOR HIGH SCHOOL

Cardiovascular (Cardiorespiratory-Aerobic) Test: All students will complete the pacer Test at least two times per year.

THE PACER TEST

1. Designate an area 20 meters apart for running the test. Mark each end with cones or tape lines.
2. All students should pair up with another student. One student will perform the Pacer while the student will serve as a counter. (He/she will keep track of the total number of laps completed.)
3. Students run across the designated area and touch the line by the time the beeper sounds. At the sound of the beep they turn around and run back to the other end. If a student gets to the line before the beep, they must wait for the beep before starting back to the opposite direction.
4. When to stop - When a student does not reach the line by the beep, he/she should reverse direction on the beep (even if they haven't touched the line). Allow the student to catch up with the pace until he/she has missed two beeps. Students completing the test should continue to walk and then stretch in a cool-down area.
5. Record the total of laps completed.

Other tests or methods to evaluate cardiovascular endurance may include the Mile Run, the 1-1/2 Mile Walk or the 12 Minute Run. Class activities used to develop C-V Endurance could include walking activities, jogging activities, running activities, jump rope activities, aerobic dance, step aerobics, soccer, team handball, ultimate Frisbee, flag football or any activity which elevates the heart rate into the target heart rate.

FLEXIBILITY TESTING - THE SIT AND REACH TEST

1. All students should warm-up thoroughly before being tested on the Sit and Reach test.
2. After pre-stretching, the student should remove his/her shoes before being tested.
3. The student to be tested should place his/her feet up against the sit and reach box and another student should assist the individual being tested by supporting the knees gently.
4. While placing one hand directly over the other hand (middle fingers on top of one another) the performer reaches as far as possible without bouncing (a static stretch) four times. The last reach must be held for a full second in order to be considered a static stretch. (The count should be one thousand one). Record the total in inches and half inch increments.

UPPER BODY STRENGTH / ENDURANCE TEST - (PUSH-UPS)

1. The participant when performing push-ups should have their hands shoulder width apart. When looking from above the middle finger should be in line with the outside edge of the shoulder.
2. The test begins with the individual in the full extension or up position.
3. No rest is allowed during the test. Continuous movement must occur.
4. The push-up is counted only when the performer's shoulders go below the elbows (or a 90 degree position). This can be viewed while sitting directly in front of the person being tested.
5. The performer will follow along with the PACER push-up CD and must go down and up on the cadence provided.
6. When performing the test, the student will get one warning on poor form or not completing the push-up (all the way down or all the way up). On the second mistake the test will be over and the student will record the total number of push-ups completed.

ABDOMINAL ENDURANCE TEST (PARTIAL-CURL-UPS)

1. The students will perform the following test with a two minute time limit.
2. Technique is of the utmost importance while performing these abdominal curls.
3. The student being tested will lie down on a gym mat with knees flexed and feet 12 inches from the buttocks.
4. Another student or the teacher will serve as the counter by kneeling near the feet of the participant and **holding the feet of the person being tested. The student being tested sits up until their elbows come in contact with their knees or thighs.** After making contact, the person being tested should slowly move back down until the shoulder blades come in contact with the mat. During the test the heels must stay in contact with the ground and the knees must remain in line with the hips and shoulders at all times. After a **two** minute time limit, the total complete repetitions should be recorded. Movement should be continuous with no rest allowed.

PULL-UP TEST

1. The person being tested should start from a full hanging position from the pull-up bar and then pull him/herself up so that the chin is above the bar. The person continues to do as many repetitions as they can without kicking the feet or wiggling their legs in an upward fashion.
2. The counter should only count those pull-ups that are all the way down so that arms are perfectly straight and up until the chin is above the bar. It is a measure of upper body strength and kicking of the legs or feet is not allowed.

FLEXED ARM HANG

1. The person performing the flexed arm hang starts with his/her chin above the bar and being supported by a chair or bench and the hands grasping the pull-up bar with bent arms.
2. When ready, the chair is to be removed so that he/she is hanging with the chin above the bar and the arms supporting the body weight. Once the chair is moved the counter starts a stopwatch and keeps it running until the person can no longer keep his/her chin above the bar. Record the total time that the person held the hanging position.

WARM-UP, COOL-DOWN, INJURY PREVENTION AND TREATMENT

WARM-UP:

The method of preparing muscles and the heart for an activity.

PURPOSES OF A WARM-UP:

1. Elevate the heart rate gradually
2. Raise muscle temperature
3. Increase respiration
4. Stretch the ligaments and tendons for greater flexibility and to prevent injury
5. Psychological effect - it helps the individual to achieve a mental state of readiness

A WARM-UP CONSISTS OF:

1. Jogging or easy running
2. Static flexibility -a relaxing, non-bouncing stretch in which the participant breathes normally (does not hold breath) and holds the position for 10-60 seconds. There should not be pain during the stretching.
3. General body-conditioning exercises (calisthenics)
4. Specific exercises to the activity

GENERAL PRINCIPLES:

1. Start the warm-up at a moderate pace and increase the tempo as the body temperature and cardiovascular activity increases.
2. Performance improves with warm-up because muscles perform more efficiently when warm.

As the body heat increases:

- a. The muscles contract faster and with more force
- b. Ligaments and tendons become more pliable
- c. Nerves conduct impulses faster

THE RIGHT WAY TO WARM UP:

It is a crisp winter day, and before you begin your exercise routine you lean against your favorite tree to begin stretching. This is the way you always start off, and you're convinced it's the right way. Well, you're wrong! Athletes and doctors are now convinced that stretching cold muscles, especially on a cold day, can lead to injuries.

The best way to prepare for jogging, bicycling, sand volleyball or any other exercise is to warm up the muscles gently, and after that do your stretches. Dr. Fred Allman Jr., Past President of the American College of Sports Medicine, recommends a very mild form of exercise, something that will slowly cause the body to warm up - such as walking at a rapid pace, jogging at a slow pace, running in place, or riding a stationary bicycle.

There are sound physiological reasons for getting yourself warmed up for stretching. A warm-up period increases the flow of blood, raises the temperature of the muscles and tendons and increases their flexibility, and releases synovial fluid, the body's natural lubricant for the joints. The heart also needs some time to get ready for stretching. Vigorous stretching without a gradual warm-up leads to temporary abnormalities in blood flow and blood pressure that can be dangerous, especially for middle-aged exercisers. Wearing heavy sweat clothes does not help you warm-up. Dress for the weather, that is if it's cold, wear warm sweats; if it's hot, wear shorts. Keeping a warm-up suit on while exercising on a hot day defeats the body's cooling mechanisms and does no good.

Not only should you warm-up before stretching, but you should also think about the way you are stretching. The old keep your knees stiff and touch your toes stretch is out! It overextends the knees and back. Any kind of bouncing for cold muscles and joints to get them loose is very bad since bouncing actually tightens cold muscles. The hamstring muscles located on the back of the upper leg need to be stretched for most activities and also have an effect on low back flexibility. In the standard touch your toes example, bend as low as you can, without locking your knees until you feel your hamstrings and back muscles start to stretch - and hold that position for 10-60 seconds without pain and not fighting the muscle tissue. (Don't forget to breath in a relaxed, slow and gentle manner.) When you stand up, bend your knees to ease the load on the back. Repeat this several times until you can reach the floor without strain.

COOL-DOWN

The cool-down is the warm-up process in reverse. It allows the muscles to release metabolic wastes built up during activity and allows the body functions to return to normal.

PURPOSE OF A COOL-DOWN:

1. Allows you to gradually diminish the intensity which follows work
2. Permits the return of circulation and other body functions to normal
3. Eliminates the pooling of blood following the abrupt stopping of the activity
4. Speeds up the removal of muscle waste products
5. Helps eliminate cramps and stiffness

A COOL-DOWN CONSISTS OF:

1. Light jogging at a slow pace
2. Slow static flexibility
3. Slow and easy activity movements

GENERAL PRINCIPLES OF COOL-DOWN:

1. The key is not to stop suddenly, but gradually slow down your activity.
2. One of the best indications that your cool-down has worked is when sweating has stopped.

INJURY TREATMENT:

Treatment of any injury means R.I.C.E. or REST, ICE, COMPRESSION AND ELEVATION for a minimum of 24 hours after the injury took place. NEVER use heat within this time period as it only causes more bleeding and increases swelling. Use the following measures:

REST - Rest the injured area. Limit the amount of activity until the swelling is relieved through the following procedures.

ICE - Put ice wrapped in a towel or plastic bag over the injured area. Keep moving it every five minutes to avoid frostbite and continue for up to 30 minutes two or three times daily for the first day or two following the injury. This will help reduce swelling and internal bleeding.

COMPRESSION - Gently (not too tight) wrap an elastic bandage around the injured area. Numbness, cramping or additional pain means the bandage is too tight. To limit swelling and promote healing, leave the bandage on for 30 minutes. Remove it for fifteen minutes to permit circulation and repeat this procedure over a three hour period several times during the first hour after the injury.

ELEVATION - Raise the injured leg or arm on a pillow above the level of the heart. This helps drain excess fluids, limits internal bleeding and clears away injured tissue. For the first few days following injury, continue elevating as much as possible even while sleeping.

RESTING AND TARGET HEART RATE

The heart is a muscle and like any other muscle must be overloaded to get stronger. Aerobic activities such as running, jogging, swimming, cross-country skiing and jumping rope force larger than usual amounts of oxygen into the lungs and from there into the bloodstream for the body to use. The best indication of an efficient heart is a low resting heart rate. The lower the resting heart rate, the stronger the stroke volume, or the amount of blood pumped with each heart beat.

Dr. Kenneth Cooper, who wrote the books about aerobics (with oxygen), has done years of research on exercise and the heart. The lowest resting heart rate he has ever evaluated was Hal Higdon, a marathon runner who's resting heart rate was 28 beats per minute! The average resting heart rate is 70-90 beats per minute. The heart of a physically fit person, with a resting heart rate of 50, beats 9,512,000 times less per year than an average person's heart with a resting heart rate of 70 beats per minute. The better shape you are in, the lower your resting heart rate will be.

Of all the vital signs that physicians consider when evaluating patients, pulse ranks number one. The beating heart has always been the most basic symbol of life and the most easily measured indicator of what's going on in the body.

The best way to take your pulse is by placing two fingers over the radial artery of the wrist. You can locate the radial artery by turning your palm up, feeling for the bone at the outside (thumb side) of the wrist, and then moving your finger pressure just inside this bone. Do not use the thumb to take your pulse because it has a small artery of its own.

The ideal time to take a true resting pulse is when you wake up in the morning before even getting out of bed. Using a clock to time 60 seconds, and find your pulse at the radial artery. Count your pulse for the entire 60 seconds and record below. If you continue to work on your cardiovascular system, (walking, jogging, running, long distance swimming, jumping rope, cross country, skiing, full court basketball, etc...) your resting pulse will become lower.

RESTING PULSE RATE

DATE	WHERE ARE YOU?	TIME	RESTING PULSE RATE

HOW HARD SHOULD I EXERCISE?

You can find out how hard to exercise by keeping track of your heart rate. Your maximum heart rate is the fastest your heart can beat. It is usually considered to be 220 minus age. Exercise about 80 percent of the maximum heart rate may be too strenuous unless you are in excellent physical condition.

The best activity level is 65 to 80 percent of this maximum rate. This 65 - 80 percent range is known as your target heart rate.

Target HR should be 65-80% of Max HR depending on the level of fitness:

Example:

$$220-15 = \text{Max HR of } 205$$

$$.65 \times 205 = 133.25$$

$$.80 \times 205 = 164$$

Target HR should be between 133 and 164!!

TARGET HEART RATE - CALCULATING YOUR OWN

Using the formula from above, calculate your Target Heart Rate and record it below:

$$220 - \text{AGE} = A$$

$$\text{MULTIPLY } .65 \text{ TIMES } (A) = \underline{\hspace{2cm}}$$

$$\text{MULTIPLY } .80 \text{ TIMES } (A) = \underline{\hspace{2cm}}$$

DATE = _____

TARGET HEART RATE = _____

DATE = _____

TARGET HEART RATE = _____

When you begin your exercise program, aim for the lower end of your target. As you get into better shape you can gradually build up to a higher work load.

MONITORING PULSE RATE

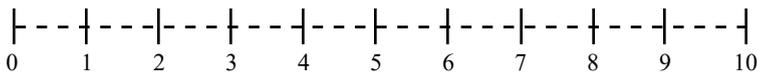
1. When you stop exercising, quickly place your index finger and your third finger lightly over the soft part of your wrist.
2. Count your pulse for 15 seconds and multiply by four.
3. If your pulse is below your target rate, exercise a little harder next time. If you are above your target, exercise a little easier. If the pulse rate falls within your target, you are right where you belong for a training effect to occur.

HOW DO I KNOW IF I'M WORKING TOO HARD?

It is important to exercise at a comfortable pace. When jogging or walking briskly, you should be able to keep up a conversation comfortably. If you do not feel normal again within ten minutes of stopping your exercise, you are pushing too hard.

BORG'S SCALE

A number of years ago, a scientist named Gunnar Borg developed a subjective scale to rate how hard you are exercising. Borg's scale was later modified using a range of 0 to 10. Using these numbers, you rate how hard you are exercising based on your feeling of fatigue. A rating of 0 would mean you are hardly working at all. A rating of 10 would mean all-out exhaustion.



What you should be feeling at each level is listed below.

1. This is the feeling you get at rest. There is no feeling of fatigue. Your breathing is not at all elevated. You will not experience this at all during exercise.
2. This is the feeling you get working at your desk or reading. There is no feeling of fatigue. Your breathing is not elevated.
3. This is the feeling you might get while getting dressed. There is little or no feeling of fatigue. Your breathing is not elevated. You will rarely experience this low level while exercising.
4. This is the feeling you might get while slowly walking across the room to turn on the television. There is little feeling of fatigue. You may be slightly aware of your breathing, but it is slow and natural. You may experience this right in the beginning of an exercise session.

5. This is the feeling you might get while slowly walking outside. There is a very slight feeling of fatigue. Your breathing is slightly elevated but comfortable. You should experience this level during the initial stages of your warm-up.
6. This is the feeling you might get while walking briskly to the store. There is a slight feeling of fatigue. You are aware of your breathing and it is deeper than in level 4. You should experience this level at the end of your warm-up.
7. This is the feeling you might get when you are walking somewhere and are very late for an appointment. There is a general feeling of fatigue, but you know that you can maintain this level. Your breathing is somewhat deep and you are aware of it. You should experience this level in the transition from your warm-up to your exercise session and during the initial phase of learning how to work at level seven or eight.
8. This is the feeling you might get when you are exercising vigorously. There is a definite feeling of fatigue, but you are quite sure you can maintain this level for the rest of your exercise session. Your breathing is deep and you are definitely aware of it. You can carry on a conversation, but you would probably prefer not to. This is the baseline level of exercise that you will maintain in your exercise sessions.
9. This is the feeling you might get when you are exercising very vigorously. There is a very definite feeling of fatigue, and if you asked yourself if you could continue for the remainder of your exercise session, you think you could, but are not 100 percent sure. Your breathing is very deep, you can still carry on a conversation, but you don't feel like it. This becomes the feeling you should experience only after you are comfortable reaching a level seven and are ready for a more intense workout. This is the level that produces rapid results, but you must learn how to maintain it. Exercising at this level is difficult for many people.
10. This is a feeling that you would experience if you were exercising very, very vigorously. You would experience a very definite feeling of fatigue and if you asked yourself if you could continue for the remainder of your exercise session, you probably could not. Your breathing is very labored and it would be very difficult to carry on a conversation. This is a feeling you may experience for short periods when trying to achieve a level 8. This is a level that many athletes train at and it is difficult for them. You should not be experiencing a level 9 on a routine basis, and should slow down when you do.
11. You should not experience a level 10. This is the feeling you would experience with all-out exercise. This level cannot be maintained for very long, and there is no benefit in reaching it.

Take the time to learn each level. Remember, you are striving to achieve a level 7 or 8 during your exercise session. Level 7 equates to approximately 70 percent of your maximum heart rate, while level 8 equates to about 80 percent.

WELLNESS

WHAT IS WELLNESS?

Wellness is defined as an active process through which an individual becomes aware of and makes choices toward a healthy lifestyle. The ultimate responsibility for wellness of an individual rests with that person...not with anyone or anything else. The key word is CHOICE and the basis for the concept is SELF RESPONSIBILITY. You can change how you feel and look if you want to.

A wellness approach to life is a total health plan concerned with both mind and body. At one end of the spectrum you have a high level of wellness. At the other end, you have premature death. It is a continuum. You make choices every day that move you either closer to wellness or closer to illness and premature death. The Wellness Continuum is located in the Sophomore Wellness section of this book. Scientific and medical research have provided us with certain risk factors concerning exercise, diet, health and stress which should influence our lifestyle.

MAJOR MEDICAL PROBLEMS IN THE UNITED STATES

In the United States, we have a high standard of living. In many respects this is great and yet in other ways it has created many problems. Our affluent society depends on machinery, power tools, equipment and cars to do most of our work. Television, theaters, spectator sports take a great deal of our leisure time. Because of our way of life the American male's life expectancy is 74 years of age. This ranks us 37th among other civilized nations! These sedentary ways, along with our poor eating habits, have brought about three of this country's greatest medical problems. Cardiovascular disease ranks as the number one health problem in the United States. 500,000 Americans die each year from heart attacks. "Cardio" is another word for heart and "vascular" refers to the blood vessels. Scientific studies have shown that active people have less heart disease and are less likely to die from heart attacks than inactive people. Some symptoms of heart disease start to develop when people are in their teens. For this reason, it is important to develop and maintain cardiovascular fitness early in life.

Another major medical problem in the United States is the fact that many Americans are overweight. Most studies indicate that at least one-third of the children and one-half of the adults in the United States are overweight. This problem stems from eating excessively, especially fast foods, lack of exercise, and eating junk food for snacks. This overweightness also places a great deal of stress on our heart and circulatory system.

Thirdly, and yet another significant medical problem, is low back pain. It is estimated that as many as 25 million Americans seek a doctor's care for backache. Estimates are that 8 out of every 10 people in the United States seeks a doctor's care for low back pain.

What is significant about these three tremendous medical problems including cardiovascular disease, overweightness, and low back pain is that they are all preventable. Diseases such as these are considered HYPOKINETIC DISEASES.

HYPOKINETIC DISEASE

Hypokinetic Diseases are caused in part by a lack of physical exercise or inactivity. In essence, these diseases can be controlled in two ways—regular exercise and good nutrition.

LIFESTYLE GOALS

The key to a Wellness approach is that we do not have to die as early as we do. We can control the quality of our life by proper diet and nutrition, regular exercise, controlling the use of cigarettes and alcohol and learning to cope with stress. If we learn what we can about these aspects of Wellness and adjust our lifestyle, we can, to a certain degree, control the quality of our lives.

It is really up to you. Do you want to be a casualty, a heart attack victim? The best health insurance you can get is preventive medicine. You can do more for yourself than anyone. The important thing to do is to learn now while you are young, what the health risks are and adjust your lifestyle. It will be easier for you to adjust now than in later years.

1. Everyone is unique in their own way. Do not compare yourself to other students. Strive to improve in your own way. Making lifestyle changes or forming new habits are not easy tasks. Be patient, set realistic goals and be regular.
2. Heredity - The lean, athletic body is not for everyone. Heredity affects how you look so don't expect unrealistic changes. Make the best of what you've got.
3. Leisure time or available free time from work responsibility is continuing to increase. Recent research states that children without cable television spend 6 hours per day watching T.V. while those with cable watch 8 hours of television per day.
4. The highest priority for corporation is back care. Most injuries that occur or sick days taken are due to back related problems Eight out of ten people in the U.S. suffer from low back pain at some point in their lives.
5. The number one killer in the United States continues to be cardiovascular disease.

The following facts are from the American Heart Association:

FACT - In recent years, heart and blood vessel diseases killed nearly 1 million Americans, almost as many as cancer, accidents, pneumonia, influenza and all other causes of death combined.

FACT - Almost one in two American's dies of cardiovascular disease.

6. The F.I.T.T. principle must be understood in order to get physically fit and remain that way. 'F' refers to the frequency of exercise which should be regular and take place three to five times per week. 'I' refers to the intensity of exercise and is based on the theory of overloading the body. 'T' refers to the time or duration of exercise and this should be 15-30 minutes in your target pulse rate. (65% - 80% of maximum heart rate (220) minus your age). 'T' refers to the type of exercise that you took part in (aerobic or cardiovascular, strength or muscular endurance exercise).

HEALTH RELATED PHYSICAL FITNESS

PHYSICAL FITNESS - YOUR LIFE DEPENDS ON IT

Physical fitness is defined as the ability to carry on everyday activities without undue stress or fatigue, while remaining able to respond to the increased demands of an emergency. It also includes the ability to pursue recreational activities without pain, stress, or exhaustion. There are five aspects of physical fitness: body composition, muscular strength, muscular endurance, flexibility and cardiovascular fitness.

It's a popular belief that sports are also a good way to become more physically fit. While sports may be fun and relaxing, they often come up short as a method of achieving fitness. The relationship between sports and fitness should be that you get in shape to play your sport, rather than playing to get in shape. Good athletes rarely get in shape by playing. They do additional fitness exercises such as running, weight lifting, calisthenics, and stretching.

This is not to say that sports have no fitness value. However, the value depends upon how hard you play the sport, your skill, your fitness level and your competitive nature. Another problem is that we don't usually play most sports often enough to create an improvement in fitness.

Fitness is a very individual quality. We each possess varying degrees of fitness in each component and, therefore, have quite different fitness needs. No single activity of exercise plan can be best for everyone.

Fitness has many rewards. You'll feel better, look better, and perform better. But fitness is not easy to achieve. You must work at it. You can't get there lying down or sitting. Nor can it be achieved in five minutes a day or 30 minutes a week. It does require self-discipline and you will probably have to perspire, but if you start slowly, are realistic, and have some fun while you're working, the benefits are there for the taking.

COMPONENTS OF PHYSICAL FITNESS BODY

Composition: The percentage of body weight that is fat tissue.

Muscular Strength: The amount of force a muscle can exert. This is usually measured by the amount of weight that can be moved in a single effort.

Muscular Endurance: The ability to use the muscles over an extended period of time without fatigue.

Flexibility: The measure of how limber you are; the ability to move the body through a full range of motion.

Cardiovascular Fitness: The ability of the heart, blood vessels, blood and lungs to deliver oxygen to the body.

FLEXIBILITY

WHAT IS IT?

At various points in the body, bones meet to form joints. These include the knees, ankles, hips, wrists, elbows and shoulders. Flexibility is the ability to move these joints and your muscles fully.

HOW IS FLEXIBILITY IMPROVED?

Flexibility is improved by stretching muscle tissue in a slow, gentle manner. As you stretch out, feel the pull of stretching in the heart of the muscle, not near the joint itself. To accomplish this, stretching must be done slowly without any bounce or forceful movements. Before stretching, it is wise to engage in a general warm-up such as jogging or calisthenics in order to increase body temperature and help to prepare the muscles for stretching out.

HOW DO YOU STRETCH OUT?

Stretch only to the point where a pulling sensation is felt throughout the muscle and remain in that position 10 - 60 seconds while trying to relax the muscle.

WHY IS FLEXIBILITY IMPORTANT?

As a factor in physical fitness, everyone needs some degree of flexibility. Everyone, no matter what profession, will feel better if they are relatively flexible. It is also important to understand how to safely warm-up, stretch out and cool-down in order to avoid injury while participating in leisure activities.

BASIC TECHNIQUES OF STRETCHING

1. Don't go too far at the start. Get a slight stretch and increase the stretch as you feel yourself relax.
2. Do not bounce. Stretch and hold it.
3. Of primary importance — learn how to stretch your body. Flexibility is only one of the many by-products of stretching. Do not try to be flexible. Just learn the proper way to stretch and the flexibility will come with time.
4. Breathing is important. Do not stretch to a point where you can't breathe normally. Breathe naturally—exhale as you bend forward. Develop rhythmical, slow breathing.
5. Hold a stretch in a fairly comfortable position until you feel yourself relax.
6. Think about the area being stretched. Feel the stretch. If your body is vibrating from too much of a stretch, ease up. You cannot relax if you are straining.

CARDIOVASCULAR ENDURANCE

The physically fit person lives longer, performs better, and participates more fully in life.

Many people do not get the proper amount of exercise they need. Each year over 500,000 deaths occur from heart attacks. The risk of death from heart disease is two to three times greater for the inactive person. Lack of exercise along with obesity, diabetes, excess cholesterol, high blood pressure and habitual smoking is a major risk of coronary artery disease. Fortunately, this can be changed. As the level of activity goes up, the other factors go down. The American Medical Association has estimated that in America one-half of the adults and one-third of the children are overweight. The solution may not be just less food but more physical activity. It is well known that exercise increases the effectiveness of diet programs. Hypertension (high blood pressure) decreases in many people as a result of exercise programs as does the level of blood cholesterol.

The opportunity to train and begin your cardiovascular program is NOW. Your capacity to work will increase, you will be less tired at the end of the day, and you will find a new spring in your step if you work at it. The type of fitness that really counts involves the heart, lungs and circulatory system. This is called cardiovascular or aerobic fitness. The heart, being a muscle, responds to training like any other muscle. In order to train any muscle you must push it beyond its normal load. This is an example of the overload principle.

As the heart beats at rest, only part of the blood is pushed out. The amount pushed out is referred to as stroke volume. As activity increases, the heart moves more blood into the vascular system. Of course, as the amount of blood is increased, the work load is also increased. This increased load is the stimulus which strengthens the heart muscle.

Your maximum stroke volume, or best overload probably occurs halfway between resting and maximum work. This means that if you exercise at this intensity, you will have an effective overload on your heart muscle. This allows a good training effect to take place without working so hard it becomes dangerous or uncomfortable.

In activities such as swimming, jogging, bicycling and walking, which encourage a free flow of blood back to the heart, the contraction of the heart muscle returns large volumes of blood to the heart. As the heart gets stronger, it pumps more blood and aerobic capacity increases. The more blood that flows brings more oxygen to the tissues, an increase in aerobic capacity, and the ability to do more work without fatigue.

MUSCULAR ENDURANCE

WHAT IS MUSCULAR ENDURANCE?

Muscular endurance is the ability of the muscles to work for long periods of time without getting fatigued. Muscular endurance differs from strength in that a person with good endurance allows the person to lift longer while strength allows the person to lift more. In order to move a refrigerator you would need strength. You would need muscular endurance to paint a large ceiling.

WHY IS MUSCLE ENDURANCE IMPORTANT FOR GOOD HEALTH?

People with adequate muscular endurance are less apt to have backaches or muscle soreness and/or injury. Good endurance also makes it easier for a person to have good posture. Also, if a person is alert, you are better able to cope with stress which is the physical, mental or emotional strain a person feels.

EVALUATING MUSCULAR ENDURANCE

1. Abdominal Muscle Endurance - Partial curl-ups (1 minute time limit)
2. Testing Arm Muscle Endurance - Push-ups (No time limit)
3. Testing arm and shoulder endurance - Pull-ups (No time limit)

INCREASING MUSCULAR ENDURANCE AND STRENGTH IN WEIGHT TRAINING

Perform many repetitions using an amount of weight you can continuously lift more than 8-12 repetitions. For example, doing 3 sets of 20 repetitions on the bench press would develop muscular endurance. Doing 4 sets of 6 repetitions would be a program to develop muscular strength.

HOW TO DEVELOP MUSCULAR ENDURANCE

1. Begin gradually. Too much exercise too soon can cause muscle soreness or injury. It takes muscles several weeks to get accustomed to exercising. When exercising, if you feel sore the next day you performed too hard the day before.
2. 25 repetitions for one calisthenic is enough for any exercise. If you wish to develop above average endurance you may want to perform more than 25 repetitions. Doing two sets of 25 push-ups with a rest in between is better than doing 50 push-ups all at once.
3. Perform the exercises slowly - perform each exercise with good form and correctly.
4. Move each muscle and joint through a full-range of motion. Moving your muscles and joints as far as possible will help keep you more flexible.

MUSCULAR STRENGTH

WHAT IS STRENGTH?

Muscular strength is the amount of force a muscle can exert one time.

WHY IS IT IMPORTANT TO HAVE STRENGTH?

1. Strength helps to reduce fatigue.
2. Strength can help prevent injuries and muscle soreness.
3. Strong back and abdominal muscles can help prevent low back pain, one of the greatest medical problems in the United States today. Eight out of every ten Americans seek medical advice for this problem!

OVERLOAD PRINCIPLE

Overload occurs when exercise is increased in intensity so that the demands of the body are not being met. As a result, an improvement in physical condition will take place. Overload can be accomplished in three ways:

1. Increasing the resistance or amount of work being done (lifting more weight than usual).
2. Increasing the speed of the repetitions or work (running a 6 minute mile as compared to a 9 minute mile).
3. Increasing the number of repetitions (doing 3 sets of 25 push-ups rather than one set of 25).

The increased stress is overload and after the body adapts to the increased demand it is no longer an overload. Then, you must perform a greater amount of work in order to overload.

HOW IS STRENGTH IMPROVED?

1. Calisthenics (exercises)
2. Weight Training program
 - a. Repetitions - the number of times you lift a weight.
 - b. sets - one group of repetitions (for example, if you repeat an exercise 8 times, then rest and do it 8 more times, you have completed 2 sets of 8 repetitions.

HOW IS STRENGTH TESTED?

A maximum lift (the highest amount of weight a person can lift one time) will measure strength of the certain lifts such as the pectoral muscles (bench press) and the deltoids (military press). See the Health-Related Fitness Testing section for the formula to measure strength of the pectoral muscles.

BODY COMPOSITION

The human body has three major structural components including fat, muscle and bone. Height and weight tables do not reflect body composition, a major characteristic of physical fitness. How much weight is not as important as our actual body composition. It is the objective of this lesson to give you an idea of how much fat you have in your body.

TESTS OF FITNESS

Underwater weighing and skinfold measurements are two good ways to measure fitness. Both of these methods, however, require special equipment. We are going to use the body composition analyzer, Futrex, in order to determine body fat. If you choose not to be measured, that is your choice. It is important not to be embarrassed or discouraged by this evaluation and certainly do not go on a crash diet. It is merely being done to help you understand the concept of body composition.

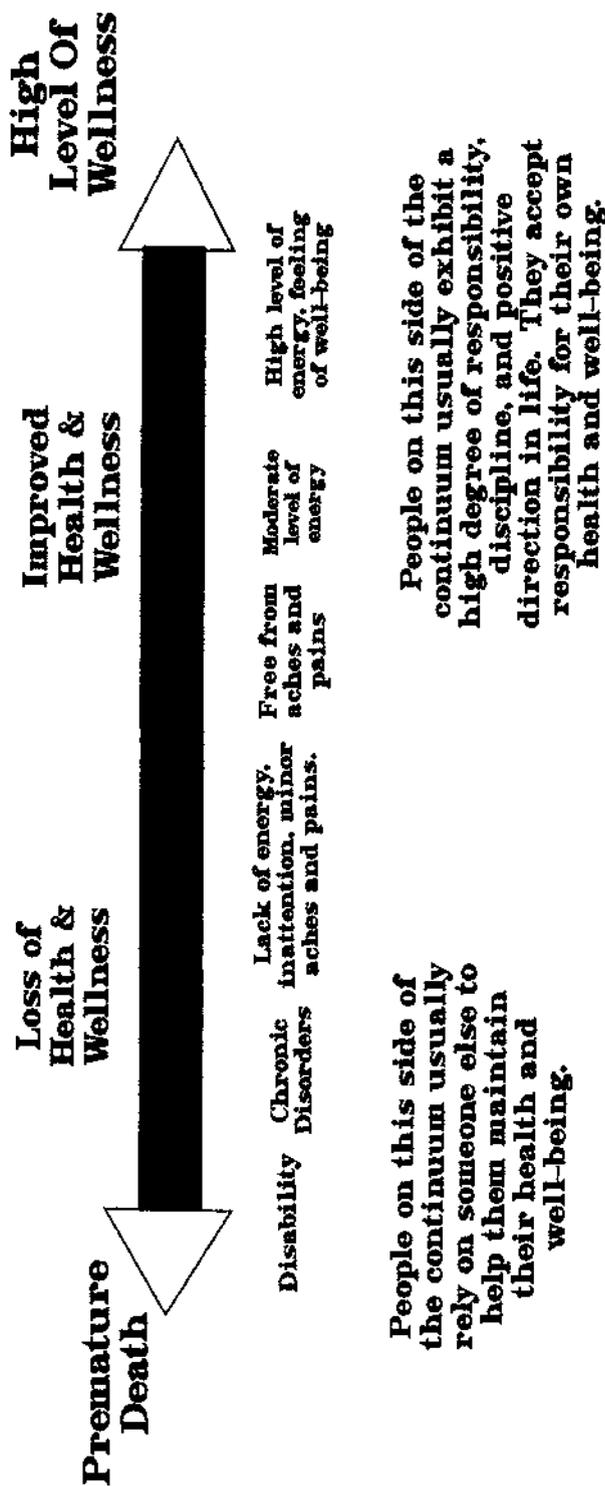
Exercise is very important in controlling the fat weight of your body. You can, through increased amounts of exercise alone, reduce the percentage of fat in your body. Many individuals with poor cardiovascular endurance will also have excessive body fat. Changes in body composition have generally not been observed unless frequency of exercise is at least three times per week and a duration of at least 20 minutes per session. These totals should be considered minimal criteria if the participant expects an improvement in body composition. Increasing physical activity is only one component of the complicated process of reducing body fat.

THE TOTAL CONCEPT OF WELLNESS

Wellness pertains to four major areas and includes:

1. **Physical Wellness** refers to the health of your body. Physical wellness is achieved through exercise, proper nutrition, preventive care, and avoidance of abusive substances.
2. **Intellectual Wellness** encourages you to continue gathering knowledge through stimulating learning experiences. As you challenge your mind, you improve your mental potential and ability. This area helps you to solve problems.
3. **Emotional Wellness** is attained through awareness and acceptance of your feelings and self-image. An emotionally well person is able to demonstrate self-expression, self-control, self-evaluation, and enthusiasm for life.
4. **Social Wellness** refers to relationships with others. It involves your ability to make friends, to cooperate with others, and be a productive member of a community and society.

WELLNESS CONTINUUM



Most people function below the Wellness midpoint.

GOAL SETTING

GOAL #1

I CAN/WILL: _____

DEADLINE DATE: _____

GOAL #2

I CAN/WILL: _____

DEADLINE DATE: _____

IN ORDER TO ACHIEVE GOAL #1, I WILL NEED TO:

IN ORDER TO ACHIEVE GOAL #2, I WILL NEED TO:

SIGNATURE: _____

WHY IT IS IMPORTANT TO EXERCISE REGULARLY

1. From the American Heart Association... “The American Heart Association has designated physical inactivity as a fourth factor of coronary heart disease joining hypertension, smoking and high cholesterol levels. Sedentary living is a substantial risk factor. It is the first addition to the list of risks for cardiovascular disease in nearly twenty years. The risk for developing cardiovascular disease doubles in sedentary people. At the present time, sedentary lifestyles are responsible for 250,000 deaths a year in the United States. There is also evidence that even low intensity activities performed daily can provide long term benefits and lower the risk of cardiovascular disease.”
2. From the American Heart Association... “Activities such as walking, hiking, stair-climbing, aerobic exercise, calisthenics, jogging, running, bicycling, rowing, swimming and activities such as tennis, racquetball, soccer, basketball, and touch football are especially beneficial when performed regularly.”
3. From the United States Department of Health and Human Services... “More than 40% of children ages 5 to 8 are already exhibiting major risk factors including obesity, high blood pressure, high cholesterol levels and poor cardiovascular efficiency.”
4. From the Dallas Institute for Aerobics... “At least 30 to 35% of the school age population are at risk for early heart or circulatory disease and premature death as adults due to poor physical fitness levels.”
5. The phrase, “Move It or Lose It” is critical to the muscular system and the heart and circulatory system because if you don’t use them they will deteriorate. (Think about how a muscle looks after taking it out of a cast after 2 weeks - it’s called atrophy and it looks sickly and weak.)
6. “Systemic Exercise” is exercise which develops the entire body including the muscular system, circulatory, respiratory and neuromuscular systems. The body responds to stimuli and adapts to regular and vigorous exercise. Each exercise session should be designed to stimulate each of these systems.
7. Physical Education Is Not Athletics -Physical Education is a required course for all students and athletics, an option for those students who are talented enough and choose to participate after school in a competitive activity. (Not everyone has an opportunity to do that). Physical Education should help all students develop personal health-related fitness and promote skills and habits which can be used in leisure time activities.
8. Individuals need to understand the importance of muscular strength development and the effect on a person’s metabolism. Individuals with more muscle have a higher metabolism. Therefore, if a high level of muscle is developed (through weight training, calisthenics and regular exercise) then the individual has a greater chance to maintain a weight level which is considered healthy.
9. Eight out of ten Americans seek medical care for low back problems. The problem is a lack of flexibility of the hamstring muscles and poor abdominal strength. These two areas must be conditioned and trained to support the vertebral column and abdominal wall. This can be done only through regular exercise which emphasizes progressive resistance of these muscle groups.
10. At the present rate, one out of every two Americans alive today will die from some form of cardiovascular disease. According to the American Heart Association, in order to improve cardiovascular fitness, individuals need to perform aerobic activities which elevate the heart rate to between 65% - 80% of their maximum. These kinds of activity also improve respiratory efficiency.
11. Exercise is an excellent way of dealing with stress, anxiety and improves mental health. Everyone needs an outlet to relieve stress and the pressures of everyday life. No other method is more healthy and beneficial than regular exercise.

12. What else does regular, vigorous exercise promote?
- o Improved cholesterol levels -regular exercise lowers LDL's (bad cholesterol) and increases HDL's (good cholesterol)
 - o Lowers blood pressure
 - o Maintenance of optimal body weight and composition
 - o Stronger bones
13. There are over 90 medical and physiological studies to support the following facts:
- o Exercise should exceed more than 1000 calories per week to be effective
 - o Exercise must be regular
 - o Age is not a deterrent to cardiovascular training
 - o A person can de-train in two weeks without exercise
- The following statements are true:
- Respiratory function decreases 40% in a lifetime
 - Nerve conduction decreases 20%
 - Liver and kidney functions decrease 45% by age 70

CARDIOVASCULAR RISK FACTORS

The American Heart Association and American College of Sports Medicine list primary and secondary risk factors for coronary heart disease as follows:

PRIMARY:

1. Major alterable risk factors: These are factors that can be modified.
 - A. Physical inactivity
 - B. Smoking - #1 preventable health problem
 - C. High blood pressure (140/90)
 - D. High cholesterol levels
 - desirable: below 200 mg/dl
 - moderate risk: 200-239 mg/dl
 - high risk: 240 mg/dl
2. Major unalterable risk factors: These are factors that can't be modified. Persons in these groups have a greater risk of heart disease, particularly if they adopt unhealthy behaviors.
 - A. Those with a family history of heart disease
 - B. Increasing age: men over 40, women over 50
 - C. Men
 - D. African Americans

SECONDARY:

The following secondary risk factors contribute to increasing an individual's risk of CHD:

- A. Obesity
- B. High-fat diet
- C. Stress

THE ELEMENTS OF A TYPICAL EXERCISE SESSION

1. **Warm-up** - The warm-up helps to prepare the system for exercise. It should last between 5 - 10 minutes and usually consists of the same body movements that you will perform during your workout.
2. **Stretching** - Stretch each major muscle in a slow, relaxed manner known as static stretching. Do not bounce or use ballistic movements to stretch, unless you are involved in a dynamic stretching routine.
3. **The Workout** - The workout may consist of a cardiovascular phase or a strength and muscular endurance phase. These fitness areas can be combined in a workout or performed separately on different days depending upon the individual's choice or time availability.
4. **The Cool-down** - The cool down can be accomplished by performing the warm-up process in reverse. At first the individual should slow down the amount of activity being performed and then incorporate static stretches to relieve muscle tightness and soreness.

WEEKLY EXERCISE NEEDS

1. Aerobic Exercise 3 - 5 times per week in Target Heart Rate Zone.
2. Strength Training Exercise (3 times per week) performing sit-ups, push-ups or pull-ups or weight training exercises, bench press, lat pull-downs, tricep extensions, etc. that build and strengthen specific (skeletal) muscles (more muscle equals higher metabolism).
3. Flexibility Exercises (2 - 4 times per week) stretching slowly while relaxed and breathing gently (static stretching) and holding stretch from 10- 60 seconds.

Fitness is a very individual quality. We each have varying degrees of fitness in each component and, therefore, have quite different fitness needs. No single activity or exercise plan can be best for everyone.

Design a personal fitness program for maintenance and/or improvement of your own personal fitness for one month. The following are guidelines you should use:

1. Consider all five aspects of fitness. Know what aspects you need to improve and choose an appropriate exercise plan. Supplement your exercise plan with other activities so you will maintain all components of fitness.
 - Cardiovascular Endurance
 - Muscular Strength
 - Muscular Endurance
 - Flexibility
 - Body Composition
2. The program should create a training response. This means that the exercises must be done with the proper frequency, intensity, duration, and type of activity. (F.I.T.T. Principle)
3. The exercises should involve all parts of the body and major muscle groups. Do not over exercise one area of the body while neglecting another.
4. Fitness improvement requires progression. There should be some way to measure your exercise load. Keeping track of your progress helps you evaluate and set goals. You can use a block calendar to detail exactly what you are doing. Example - What exercises will you do for warm-up?

F.I.T.T. Principle 3 times a week within target heart range (See calculating target zone - Freshman Concepts) minimum 15 - 60 minutes.

AEROBICS

DEFINITION:

Exercises that demand large quantities of oxygen for prolonged periods and ultimately force the body to improve those systems which transport oxygen.

BENEFITS OF ACTIVITY:

1. Aerobic exercise promotes strong and healthy bones. Bone, like muscle, tends to get stronger and thicker the more it is exercised.
2. The total blood volume increases, so that the body is better trained to transport oxygen.
3. Lung capacity increases and this increased capacity to deliver oxygen is associated with a greater longevity.
4. The heart muscle grows stronger and with each heart beat there is an increased stroke volume which pumps more oxygenated blood through the circulatory system.
5. HDL or High Density Lipoprotein, increases as a result of aerobic exercise. This “good” cholesterol helps reduce the potential for developing arteriosclerosis, or hardening of the arteries.

TERMINOLOGY:

Aerobic: see definition at beginning of section

Anaerobic: without oxygen - short bursts of energy followed by a resting phase Ex. weight training

Cool-down: allows the muscles to release metabolic wastes built-up during activity and allows body functions to return to normal

Target Heart Rate Formula: $220 - \text{age} - \text{resting heart rate}$, multiply 65% - 80% + resting heart rate

Warm-up: method of preparing muscles especially the heart for activity

F.I.T.T. PRINCIPLE

Frequency: How often? 3X5 times a week for beneficial results.

Intensity: How hard do you work? Monitoring your exercising heart rate; it should be in the target heart range of 65-80%

Time: How long? At least 20-60 minutes each workout for cardiovascular benefits

Type: What kind of exercise?

Outdoor

walking, slow jogging
bicycling
hiking
cross-country skiing
roller blading
running

Indoor

stationary bicycle
rowing machine
treadmill
stair climbing
aerobic dance
step aerobics
long distance swimming

* Other activities such as basketball, soccer, or tennis may be aerobic if the participant is continuously moving and elevates heart rate to the appropriate level.

SAFETY:

Proper warm-up and cool-down should take place prior to and after the aerobic activity incorporating stretching, targeting muscle groups used in the activity.

Proper apparel and foot wear should be worn during the activity.

The heart rate should be periodically monitored during the activity to attain a training effect (the activity level should remain within the individuals target heart range).

Activity level should be progressively increased during the course of the unit.

MONTHLY FITNESS PLAN

LAST NAME, FIRST NAME

TARGET HEART RATE

ACTIVITIES

CARDIOVASCULAR 3 - 5 TIMES PER WEEK

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

STRENGTH 2 - 3 TIMES PER WEEK

1. _____
2. _____
3. _____

FLEXIBILITY 2 - 4 TIMES PER WEEK

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

PHYSICAL EDUCATION ACTIVITIES

BADMINTON

BASKETBALL

BOWLING

TABLE TENNIS

FLOOR HOCKEY

FLAG FOOTBALL

LACROSSE

VOLLEYBALL

PICKLEBALL

SOCCER

SOFTBALL

SPEEDBALL

ULTIMATE FRISBEE

WEIGHT LIFTING

FITNESS

FLICKERBALL

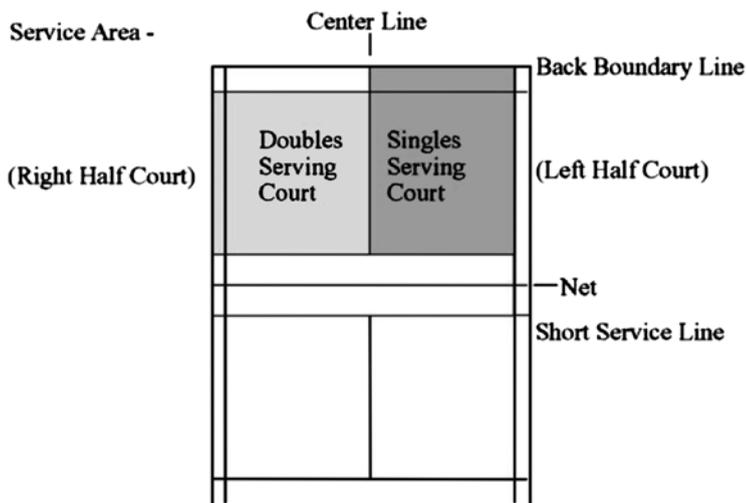
TRACK & FIELD

8TH GRADE STUDY GUIDE: BADMINTON

BENEFITS OF ACTIVITY:

Badminton is a valuable leisure (recreational) time activity in which two (singles) or four (doubles) players try to volley a shuttlecock back and forth across the net; the object being to prevent the opponent from returning the shot and scoring fifteen points. When properly played, badminton requires speed, cardiovascular endurance, power and agility.

TERMINOLOGY:



Court:	Doubles	long & wide
	Singles	long & narrow
Service Areas:	Doubles	short & wide
	Singles	long & narrow

BASIC RULES

1. Boundary lines are in play.
2. When the shuttlecock strikes the net, but still lands in the proper service area, the serve is good.
3. Shuttlecock can only be hit once on each side.
4. Shuttlecock cannot be struck by one team, while it is still on opponent's side of the net.
5. Any contact with the net causes a loss of point or serve.
6. Score should be called before each serve.

Example: *your score, opponent's score*

0 -serving 8

SHOTS TO MASTER

1. High clear
2. Dink or drop shot
3. Smash
4. Serves
 - a. High clear
 - b. Short serve
 - c. Drive serve

When serving Doubles -short serve is best.

When serving Singles -long serve is best to utilize.

SAFETY RULES:

1. Students should warm-up and stretch prior to activity.
2. Students should use proper safety precautions when handling equipment
3. If common boundaries are used, caution should be exercised.
4. Cooperation and communication between partners is essential for proper play and safety.

BADMINTON RULES

Rally Scoring

SIMPLIFIED NEW RALLY POINTS SCORING SYSTEM

Scoring System

- A match consists of the best of 3 games of 21 points.
- The side winning a rally adds a point to its score.
- At 20 all, the side which gains a 2 point lead first, wins that game.
- At 29 all, the side scoring the 30th point, wins that game.
- The side winning a game serves first in the next game.

Points – Singles

- At the beginning of the game and when the score is even, the server serves from the right service court. When it is odd, the server serves from the left service court.
- If the server wins a rally, the server scores a point and then serves again from alternate service court.
- If the receiver wins a rally, the receiver scores a point and becomes the new server.

Points – Doubles

- There is only one serve in doubles (see next page). The service passes consecutively to the players as shown in the attached diagram.
- At the beginning of the game and when the score is even, the server serves from the right court. When it is odd, the server serves from the left court.
- If the serving side wins a rally, the serving side scores a point and the same server serves again from the alternate service court.
- If the receiving side wins a rally, the receiving side scores a point. The receiving side becomes the new serving side.
- The player of the receiving side who served last stays in the same service court from where he served last. The reverse pattern applies to the receiver's partner.
- The players do not change their respective service courts until they win a point when their side is serving.

THE RALLY MAY BE LOST IN THE FOLLOWING WAYS:

- a. On the service:
 1. If the server's racket head is above his/her waist or hand at the time the bird is hit.
 2. If either of the server's or receiver's feet touch the line during the serve.
 3. If some part of each foot of both server and receiver does not remain in contact with the floor.
 4. If the server feints or balks.
 5. If the bird served is hit into the net or outside the intended service court.
 6. If the receiver's partner returns the bird, the server wins the point.
- b. During the rally:
 1. If the bird is hit into the net, under the net, into the wall, roof, or other permanent fixture, outside the boundary line.
 2. If the bird hits your person or clothes.
 3. If a player hits the net with her body or anything she wears or carries.
 4. If a player contacts the bird before it crossed the net.
 5. If the bird rests momentarily on the strings and is slung or carried.
 6. If a player hits the bird twice before it crosses the net, or if the rackets of teammates contact the bird before it crosses the net.
 7. If a player obstructs an opponent. It is obstruction to step into an opponent's court.
 8. If a player serves or receives out of turn and her side loses the rally. If her side wins and the mistake is discovered, that point is replayed.

In a Doubles match between A & B against C & D. A & B won the toss and decided to serve. A to serve to C. A shall be the initial server while C shall be the initial receiver.

Course of action / Explanation	Score	Service from Service Court	Server & Receiver	Winner of the rally		
	Love All	Right Service Court. Being the score of the serving side is even.	A serves to C A and C are the initial server and receiver.	A & B.	C	D
					B	A
A & B win a point. A & B will change service courts. A serves again from Left service court. C & D will stay in the same service courts.	1-0	Left Service Court. Being the score of the serving side is odd.	A serves to D	C & D.	C	D
					A	B
C & D win a point and also right to serve. Nobody will change their respective service courts.	1-1	Left Service Court. Being the score of the serving side is odd.	D serves to A.	A & B.	C	D
					A	B
A & B win a point and also right to serve. Nobody will change their respective service courts.	2-1	Right Service Court. Being the score of the serving side is even.	B serves to C	C & D	C	D
					A	B
C & D win a point and also right to serve. Nobody will change their respective service courts.	2-2	Right Service Court. Being the score of the serving side is even.	C serves to B	C & D	C	D
					A	B
C & D win a point. C & D will change service courts. C serves from Left service court. A & B will stay in the same service courts.	3-2	Left Service Court. Being the score of the serving side is odd.	C serves to A	A & B	D	C
					A	B
A & B win a point and also right to serve. Nobody will change their respective service courts.	3-3	Left Service Court. Being the score of the serving side is odd.	A serves to C	A & B	D	C
					A	B
A & B win a point. A & B will change service courts. A serves again from Right service court. C & D will stay in the same service courts.	4-3	Right Service Court. Being the score of the serving side is even.	A serves to D	C & D	D	C
					B	A

Note that this means

- the order of server depends on the score odd or even same as in singles.
- The service courts are changed by the servicing side only when a point is scored. In all other cases, the players continue to stay in their respective service court from where they played previous rally. This shall guarantee alternate server.

8TH GRADE STUDY GUIDE: ULTIMATE FRISBEE

HISTORY

The origin of the Frisbee dates back to the 1938 when Walter Morrison and his wife were offered \$.25 for a cake pan that they were tossing back and forth to each other on the beach in Santa Monica, California. This got the wheels turning in Mr. Morrison's head. After many designs and attempts to improve the cake pan's aerodynamics, Mr. Morrison began producing the first plastic flying discs in 1948. Early names for these flying discs included the "Whirlo-Way" and Flyin-Saucer. After still further refinements, a new plastic disc was introduced in 1955. The name given to this new and improved disc was the Pluto Platter.

In January of 1957 Mr. Morrison sold the rights of his flying disc to the toy manufacture Wham-O. Wham-O, in June of the same year decided to give the disc a brand name of "Frisbee" after learning that college students on the east coast were calling the Pluto Platter by that name. (The name "Frisbee" coming from the name of a New England pie manufacturer, the Frisbie Pie Company.) Over the years various design features have been added based upon need of what you want to do with the disc.

THROWING

The most important aspect of any game involving a Frisbee is the throwing. When throwing, you should transfer your body weight (step) towards your target. There are many different ways to hold and throw the Frisbee. Some are easier than others. Names associated with different methods of throwing a Frisbee include backhand, finger-flip, thumber, overhand wrist flip, hook thumber, and the helicopter. One of the easiest ones to learn is the backhand throw. Keep the following in mind when attempting to throw the Frisbee using the backhand method:

Backhand

- Grip – Two variations...
 1. Shake hands with the disc, thumb on top, index finger on the side and the remaining three fingers underneath the Frisbee.
 2. Shake hands with the disc, thumb on top and all four fingers on the bottom side of the Frisbee.
- Stance – Begin by being turned sideways to your target (at least at a 45 degree angle up to a 90 degree angle), keep your non-throwing foot in place (pivot foot), and step towards your target with the foot closest to your target.
- Concentrate on rotating your shoulders, hips and legs through to the point of release.
- Snap/flick your wrist as you release the Frisbee.
- Follow through pointing at your target.
- Keep the Frisbee ***flat!!!!***

CATCHING

No game of Frisbee can be complete without the catch. Catches can be made with either hand, but remember the disc is spinning so be sure to squeeze the Frisbee when catching it. Like throwing, there are many ways to catch the Frisbee. We will concentrate on the pancake and rim catch.

Pancake

- This type of catch can be used when the disc is between your shoulders and waist.
- One hand is on top and one hand is underneath the disc.
- Keep your eyes on the disc.

2-Handed Rim

- When the disc is above the shoulders – Two hands, thumbs under the rim, fingers on top of the disc.
- When the disc is below the knees – Two hands, thumbs on top of the disc, fingers under the disc.
- The 2-handed rim is the most secure catch.

1-Handed Rim

- One hand is used when it is not possible to catch with two hands.

VOCABULARY

Spirit of the Game – Ultimate Frisbee stresses sportsmanship and fair play, respect between players, adherence to the rules, and a basic joy of play.

Stall Count – The number of seconds a player in possession of the disc has to make a throw; the marker (the person guarding the player with Frisbee) keeps the stall count. The marker must call out the “Stalling” and begin counting out loud one thousand one, one thousand two, one thousand three, one thousand four, one thousand five.

Turnover – When a pass is incomplete, out of bounds, dropped, blocked, or intercepted the defense takes possession.

Foul – When physical contact takes place and disrupts the play; if a player disagrees with the call, the play is redone.

Self-Refereeing – Players are responsible for their own foul calls and line calls. Players resolve their own disputes.

Scoring – A member of your team catches the disc in the end zone to score a point.

ULTIMATE FRISBEE RULES

1. **Initiate Play** – Each team lines up on the front of their respective end zone line. The defense throws (“pulls”) the disc to the offense. A regulation game has seven players per team.
2. **Scoring** – Each time the offense completes a pass in the defense’s end zone, the offense scores a point.
3. **Movement of the disc** – The disc may be advanced in any direction by completing a pass to a teammate. Players may not run with the disc. The person with the disc has five (5) seconds to throw the disc. The defender guarding the thrower is the player who is responsible for the stall count. (See “stall count” under the vocabulary section.)
4. **Change of possession** – When a pass is not completed (e.g. out of bounds), the defense immediately takes possession of the Frisbee and becomes the offense.
5. **Non-contact** – No physical contact is allowed between players. There are no picks or screens allowed. They are considered fouls.
6. **Fouls** – When a player makes contact with another player a foul is called. When a foul disrupts possession, the play resumes as if the possession was retained. If the player committing the foul disagrees with the foul call, the play is redone.
7. **Self-Refereeing** – Players are responsible for their own foul and line calls.
8. **Sportsmanship (Spirit of the Game)** – Ultimate Frisbee stresses sportsmanship and fair play. Competitive play is encouraged, but never to hurt another player.
9. **Guarding the Frisbee thrower** – There can be only one person guarding the Frisbee thrower and they must be at least three feet away. There can be no contact with the Frisbee thrower. This (contact) will result in a foul.
10. **The Field** – A rectangular shape field with end zones at each end. A regulation field is 64 meters (210 feet or 70 yards) by 37 meters (121 feet or 40 yards).

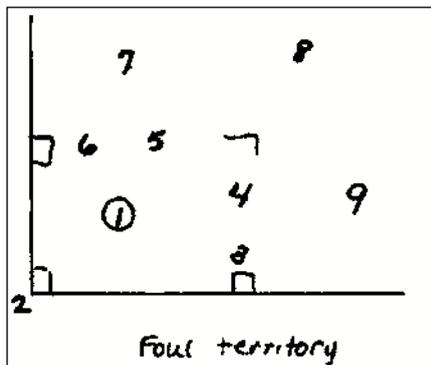
8TH GRADE STUDY GUIDE: SOFTBALL

Around 1900, the YMCA decided to bring the game of baseball indoors. Because of the limited space and the hardness of the baseball, they made the ball softer and larger, and the baseline and pitching distances shorter. They also changed the pitch to an underhand motion.

A game of softball consists of 7 innings. If the game is tie at the end of seven innings, the game goes into extra innings until the game is no longer tied at the end of an inning.

Players: There are 10 player positions in an official softball game. The player positions are as listed:

- Pitcher
- Catcher
- First baseman
- Second baseman
- Shortstop
- Left Fielder
- Center Fielder
- Right Fielder
- Short Center Fielder or an additional center fielder, where one would play left center field and the other would play right center field.



The **batter** is out if...

- o He/she strikes out.
- o The ball is bunted.
- o The batter hits a fly ball and is caught.
- o When there are less than two outs with two runners on base and a pop-up is hit in the infield (Infield fly rule).
- o The batter is tagged or thrown out.

A **base runner**...

- o Must touch each base in order (first, second, third and home).
- o Can only overrun first base, but cannot make an attempt to go to second.
- o May not leave the base until the ball is hit by the batter.
- o Must return to the base and tag-up when the ball is caught.

A **base runner** is **out** if...

- o Tagged while off the base, except when overrunning first base.
- o The ball reaches a base where there is a force out.
- o Tagged by a fielder with the ball.
- o Runs out of the baseline (usually by more than 3 feet)

SOFTBALL TERMS

01. **Ball** – a legally pitched ball that is not touched by the bat and is not in the strike zone.
02. **Base path** – an imaginary line 3 feet on either side of a straight line between the bases.
03. **Base runner** – a batter who has finished his turn at bat, has reached first base, and has not been thrown or tagged out.
04. **Batting average** – the number of hits divided by the number of bats.
05. **Single** – a one-base hit.
06. **Double** – a two-base hit.
07. **Triple** – a three-base hit.
08. **Home run** – a hit where the runner is able to reach all 4 bases without being out.
09. **Double play** – two outs accomplished during a single play.
10. **Triple play** – three outs accomplished during a single play.
11. **Fair ball** – a batted ball that lands in fair territory.
12. **Fair territory** – the part of the playing field within the first and third base foul lines
13. **Foul ball** – a batted ball that lands in foul territory. Runners may not advance.
14. **Fielder** – any player of the team in the field.
15. **Fly ball** – any ball batted into the air. (A fly ball usually has an arc in its flight.)
16. **Ground ball** – a batted ball which rolls on the ground.
17. **Line drive** – a batted ball that is hit sharply and directly into the playing field, usually in a straight line without any arc.
18. **Infield** – the part of the field in fair territory covered by all players other than the outfielders.
19. **Outfield** – the position of the field outside the “diamond”.
20. **Inning** – segments of the game in which each team bats and plays the field. It is considered the top of the inning when the visiting team is batting, and the bottom of the inning when the home team is batting. An inning is made up of six outs – three by each team.
21. **Force out** – an out that occurs when the base runner is forced to advance to the next base because the batter hit a fair ball. The fielder can put the runner out by touching the base while holding the ball.
22. **Tag out** – a way of putting the runner who is not touching the base. The fielder must tag (touch) the runner with the ball. The fielder must always tag out a runner who is not forced to run.
23. **Strike zone** – the space over home plate and between the batter’s shoulders and knees.
24. **Infield fly rule** – when there are less than two (2) outs and with at least two (2) runners on base, the ball is hit into the air (fly ball) in the infield, the batter is automatically called out.
25. **Overthrow** – a play in which the ball is thrown from one fielder to another and the second player does not catch the ball. If the ball goes out the playing area, the base runners may advance only one (1) base.

8TH GRADE STUDY GUIDE: BASKETBALL

THE HISTORY OF BASKETBALL

Dr. James Naismith is known as the inventor of basketball. Basketball was introduced at the Berlin Olympics in 1936. Today basketball has grown to become one of the world's most popular sports.

DRIBBLING

Dribbling allows you to:

1. Move the ball quickly up the court when you can't pass to a teammate.
2. Keep control of the ball while waiting for a teammate to get into position for a pass, or to move you to a better position for a pass.
3. Drive to the basket on your own.

It is important that dribbling is not overdone. Too much dribbling ruins the idea of teamwork because four players end up standing around watching one player. It is also a slower method of moving the ball; passing and shooting are much quicker. Learn to dribble well, but also learn "when" to dribble.

Dribbling Technique

1. Use finger pads (not palms)
2. Keep ball waist high
3. Wrist relaxed
4. Push the ball with a pumping motion of your arm
5. Keep the non-dribbling arm bent at the elbow and away from your body to help with balance and to shield the ball away from your opponent.
6. Keep head and eyes up (not on the ball).
7. The cross-over is used to switch hands while dribbling.

PASSING

Passing is used to advance the ball to another player (quicker than dribbling).

Passing Technique

1. All passing is done with finger pads - not palms
2. Your fingers should be spread on the sides of the ball for better control
3. Step toward your target to get power from your legs
4. Follow through

Types of passes - Chest pass, Bounce pass, Overhead pass

SHOOTING THE BALL

The power for the shot comes from the feet and flows up from the toes through the ankles, up through the knees, hips, upper body, arms, wrist, hand, and finally fingers. All this should happen in one continuous motion.

B.E.E.F.

Balance – feet at least shoulder width apart, knees bent, one foot slightly in forward, body weight on the “ball” of the foot (heels off the floor).

Eyes – focused on the back part of the rim or the spot on the backboard.

Elbow/Extension – elbow lined up with “shooting” foot at a 90 degree angle; extensions – beginning with the lower part of the body and ending with the shooting arm, straighten or extend all body parts up.

Follow through – as the arm nears fullest extension, flick the shooting wrist up, forward and down, letting the ball roll off finger pads. This will give your shot backspin.

RULES

- The start of the game will have a jump ball at center court.
- The ball will be passed in anytime the ball is thrown, dribbled or knocked out-of-bounds.
- The rim is 10 feet high and the foul line is 15 feet away from the basket.

VIOLATIONS

If a team commits any of these violations, they lose possession of the basketball to the other team.

1. 3 seconds - the player on offense stays in the free throw lane for more than 3 seconds.
2. Inbound Violation - the offensive team does pass the ball in from out-of-bounds within 5 seconds.
3. Backcourt Violation - the offensive team does not advance the ball over half-court in less than 10 seconds.
4. Traveling - walking with the ball
5. Double Dribble - dribbling after you have stopped dribbling or dribbling with 2 hands at the same time.
6. Over and Back - after the offense has brought the ball past half-court they cannot let the ball go behind them into the back court.
7. Carrying - when a player dribbles the ball with his/her hand underneath or too far on the side.

TYPES OF FOULS

Fouls can result in a free-throw if an offensive player is fouled while shooting or after an accumulation of 6 team fouls occur. Each individual player is allowed 5 personal fouls.

1. **Holding:** not allowing the offensive player to go where they want to by making physical contact with them.
2. **Blocking:** moving in the pathway of the offensive player and bumping into them with your body.
3. **Pushing:** when a defensive player pushes or makes contact with his/her extended arms.
4. **Charging:** an offensive payer either pushes or runs into a defensive player while the defensive player is stationary

POSITIONS

In a regulation basketball game there are 5 players on each team.

- **Guards (2):** Responsible for doing most of the ball handling; usually smaller and quicker than the rest of the teammates.
- **Forwards (2):** Responsible for some of the ball handling and most of the scoring; usually more versatile than guards and the center.
- **Center (1):** Does most of the “dirty” work inside the free throw lane; usually one of the biggest players.

SCORING POINTS

- **3 pts:** Any shot outside the 3-point line.
- **2 pts:** Any shot inside the 3-point line.
- **1 pt:** Any free-throw shot

TYPES OF DEFENSE

- **Man to Man:** Cover a specific person.
- **Zone:** Cover a specific area.

BASIC TERMINOLOGY:

Rebound - gaining possession of the basketball off the rim or backboard after a missed shot.

Box Out or Blocking out - turning one’s back and making slight contact with your opponent in an attempt to get a rebound after a shot is taken.

Pivot - the skill of turning your body while keeping a foot “nailed” to the floor, rotating around on the “ball” of the foot in an effort to protect the basketball and/or to turn to see your basket.

Screen - the skill used to block an opponent so a player can get open for a pass or dribble around their defender.

Steal - take the ball away from the other team.

Blocked Shot - a shot that is deflected or hit by the defensive player.

Lay-Up - a shot, which is taken while on the run. Worth 2 points.

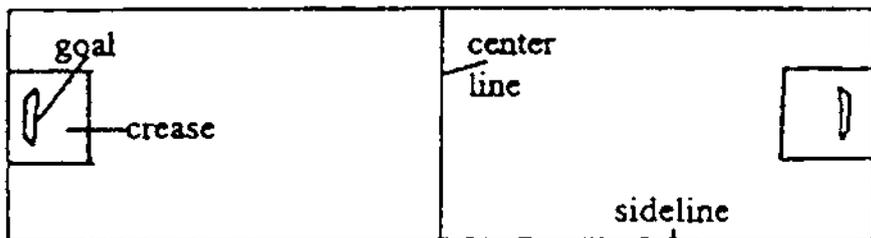
Free Throw - a 1-point shot made from the free-throw line after a foul has been committed.

Defensive Stance – a balance position where the feet are spread wide, knees are bent, body weight is on the “ball of the foot, hands are in the “passing lanes” and you are positioned between your opponent and the basket with your back to the basket and you are trying to prevent your opponents from scoring.

8TH GRADE STUDY GUIDE: FLOOR HOCKEY

PLAYING AREA

- Play always starts from the center line after each goal or foul.
- The goal box (crease) is an area around the goal, which no players other than the goalie may enter.



TEAM

- Each team consists of six (6) players. (One (1) goalkeeper/goalie, one (1) center, two (2) defensive players, two (2) offensive players.)
- Every member of a team will have to play each and every position.
- The goalkeeper can stop the puck with any part of their body or with the use of their stick.
- The center is the only player allowed to cross the center line. The center has his/her stick striped with tape.
- The defensive players cannot go past the center line into the offensive area. Their responsibility is to keep the puck out of their defensive half of the floor, thus helping the goalie keep the puck out of the net.
- The forwards work with the center on the offensive end of the floor. These players are sometimes called "wings" (left and/or right) and like the defensive players cannot go past the center line.

GAME

- A normal game of hockey consists of three periods, but usually for our games we will use a set time limit determined by the number of teams for that particular class period.
- The game starts with a "Face off." The centers on each team will alternate tapping the ground and the opposite teams stick for a total of three times. After three hits, both centers can go for the puck. .
- When a player accumulates 3 fouls of any type, he or she will be out for the duration of the game.
 - The penalty for a first violation/foul is to sit out for thirty (30) seconds.
 - The penalty for a violation/foul is to sit out for one (1) minute.
 - When a player accumulates three (3) fouls of any type, the player will be out for the remainder of the game.
- Changing positions on the floor may only occur, ONLY if substitutions are entering the game. If someone is out for a penalty, nobody may play that position.
- Roughing or misconduct fouls against the goalie will be served by the goalie. Another player who is already on the floor may NOT take over the duties of the goalkeeper for the time he/she is out of the game.

GOALKEEPING

- The goalkeeper may use any part of their body, or their stick to stop the puck from entering the goal, provided they are in the crease.
- The goalkeeper may *underhand* throw the puck, however, it is a misconduct foul if a puck thrown by the goalie crosses the center line.
- Clearing the puck with the stick directly across the center line is also a misconduct foul.
- At no time is the goalie exempt from receiving penalties for roughing, slashing, high sticking, or leaving his/her feet when he goes outside the goal box to play the puck.
- All rules pertaining to the goalie clearing the puck are in effect whether he/she is in or outside the goal box.
- The goalie has only three seconds to play the puck from the crease, once he has control and possession of the puck. (The penalty for holding onto the puck is loss of possession with the other team receiving the puck at the center line.)

FOULS

The various types of **roughing fouls** are . . .

1. Slashing - When an opponent is hit with the stick and in the judgment of the official the player slashing has no chance to hit the puck.
2. Making contact with another player with a high stick. (5 minute major penalty)
3. Contact with the goalie while in the goal box.
4. Pushing.
5. Blocking with the body.
6. Tripping or hooking with the stick.
7. Body checking.

Types of **misconduct fouls** are . . .

1. Anytime play is deliberately stopped by holding, laying, or placing foot on puck to delay game.
2. Leaving your feet (sliding) to block the puck.
3. After falling down, playing the puck while lying on the floor.
4. Offensive and defensive players crossing the center line. (Feet are the determining factor.)
5. Offensive players entering the goal box with any part of their body and/or stick.
6. Player other than the goalie catching or closing hand on puck. Hitting the puck with the hand is allowed, but a puck played with the hand to a member of the same team will have a penalty called and loss of possession.
7. Deliberately hooking, grabbing, or kicking the stick out of the hands of an opponent.
8. Swinging the stick above the **knee** during play.
9. The goalie throwing the puck in such a fashion that it crosses the center line, or while clearing the puck with his/her stick, clears the puck directly over the center line, or the goalie throws the puck out of play.

GRIPPING THE STICK/STICK HANDLING

- Hands are separated on the stick with the dominant hand somewhere close to the middle of the shaft and the non-dominant hand on the shaft of the stick close to the butt end.
- On a forehand shot/pass, the palm of the dominant hand should go away from your body, while the palm of the non-dominant hand goes towards your body.
- Fingers of both hands should be curled around the shaft of the stick.
- The stick should be held in such a fashion, that the entire lower edge of the blade of the stick should contact the floor.
- When receiving the puck, the blade of the stick should be held in such a fashion, that the top portion of the blade is pointed in a downward direction to prevent the ball from going over the stick.
- Players should become skilled enough, when stick handling, to be able to use both sides of the stick, thus making it more difficult for your opponent to steal the puck.

TYPES OF SHOTS

- **Wrist Shot** - This is the type of shot used most often in the game of floor hockey. When done correctly, you are able to get the shot off quickly and usually very accurately. The shot starts with the puck even with your back foot. The blade of the stick should be placed directly behind the puck so that the blade is touching the floor. The motion of this shot is a sweeping motion with the power coming from a “snap” of the wrists. There should be no back swing involved in this shot. A transfer of body weight should occur from the back foot to the front foot. The feet should be at least shoulder width apart, with the knees slightly bent (flexed). The toes of each foot should be in line with each other, perpendicular to where you want the puck to go. With the feet perpendicular, the side of the front hip should point to where you want the puck to go. Follow through in the direction you want the puck to go.
- **Slap Shot** - The slap shot is a power shot, but is not very accurate. The slap shot starts with the puck even with the front foot. A back-swing is taken just before executing the shot. The puck is contacted at the lowest point of the shooting motion. The follow through should be in the direction you want the puck to go. Just like in the wrist shot, the feet should be at least shoulder width apart with the knees slightly flexed. The toes of each foot should be in line with each other, perpendicular to where you want the puck to go. With the feet perpendicular, the side of the front hip should point to where you want the puck to go.
- **Hatrick**: When one player scores three goals in one game.

8TH GRADE STUDY GUIDE: FLAG FOOTBALL

BENEFITS OF ACTIVITY:

Learn team building skills. Life-long recreational activity.

SAFETY:

- No flags worn under T-shirts or sweatshirts.
- No unnecessary roughness.
- Players should abide by the rules of the game to make certain that the game runs more safe.

PLAYERS AND POSITIONS:

Offense:

Quarterback is the player that calls the plays and either passes or hands the ball off to another player.

Center is the player who starts with the ball every play and hikes it to the quarterback. After the center hikes the ball he/she is then going to be a blocker.

Guards are the linemen who block for the quarterback.

Ends are the players who go out for the pass or screen for the running backs. Can be called wide receivers.

Half Backs are the ball carriers or the running backs.

Full Back is a short yardage receiver and also a running back.

Defense:

- Defensive Guards are the players who rush the quarterback.
- Defensive Half Backs are the players who defend against the running plays.
- Safety is the player who defends against the pass and offers support on running plays also.

RULES:

1. To start the game the offensive team will take over 7 yards from the end line. (This is the kick-off).
2. Only one first down per possession, achieved by crossing the cones at mid-field.
3. Blocking below the waist will not be permitted. Blockers cannot leave their feet.
4. If playing touch football, there will be a 3 second delay before rushing.
5. On 4th down the offense must declare if they are going to punt or play.
6. Tackling, tripping, or any unnecessary roughness is not allowed.
7. Any ball dropped or thrown, that hits the ground, is a dead ball that cannot be recovered. There are no fumbles.
8. QB can run on any down.

ADDITIONAL FLAG FOOTBALL RULES:

Passing:

- A forward pass may only be attempted from behind the line of scrimmage.
- Offense can pass as many times as they want as long as they occur behind the line of scrimmage.
- Only one forward pass is allowed per down if the ball goes past the line of scrimmage.
- Any player can receive a pass. Ball Carrier:
- The ball carrier may not keep defenders from pulling their flags by pushing their hand away.
- The only way to prevent the defender from pulling the flag is to twist or turn around them.
- The ball carrier may hand-off the ball to any player that is either parallel to or behind him/her.
- The ball carrier may hand-off as many times as they wish. Rushing:
- There is no rush count. It has been replaced by the neutral zone. The offensive team must line up on the line of scrimmage; the defensive team begins three yards from them. The area between the two teams is called the neutral zone. If either team enters the neutral zone before the ball is snapped, it is called off sides, and a 5 yard penalty results.
- Flag Pulling:
- The flags must be worn on hips one on each side or a 5 yard penalty results.
- Pushing, hitting, or holding the ball carrier while attempting to pull the flags results in a 15 yard penalty from the line of scrimmage or from the spot where the foul was committed, whichever is greater.
- The defender must drop the flag at the spot which they pulled it off.

Dead Ball:

A dead ball occurs if any of the following occur:

- Ball carrier touches the ground with any part of his/her body other than the feet.
- Ball carrier's flags are pulled.
- Ball carrier goes out of bounds.
- Incomplete pass.
- Ball is fumbled.
- After a touchdown or an extra point.
- The punt hits the ground.
- Simultaneous catch between receiver and defender.

TERMINOLOGY FOR FOOTBALL:

Center: Snaps the ball to the QB, he must snap it between his legs.

QB: Receives the snap from center and can either pass or run.

Line of scrimmage: A line that is drawn, parallel to the football, that divides the offense from the defense.

Lateral: A ball that is pitched backward from the ball carrier.

Offsides: When a player crosses the line of scrimmage before the ball is snapped.

Pass Interference: When a defender makes contact with a receiver before he touches the pass.

First down: A first down is awarded when a team passes the mid-field cone.

Goal line: Crossing this line with possession of the football results in a touch down.

End line: This is the line after the goal line, any ball caught past this line is out of bounds.

Extra Point: You can only get an extra point after a touchdown, 1 point for a pass and 2 points for a run.

Touchdown: 6 points awarded when a team crosses the goal line while in possession of the football.

Safety: 2 points awarded to the defensive team when the ball carrier is deflagged or declared down by touching in between his own goal line and the end line.

Forward Pass: A pass thrown from behind the line of scrimmage toward the opponent's line.

Fumble: Failure of a player to retain possession of the ball while running or attempting to receive a hand-off, center, or a lateral pass.

Hand-off: A quarterback handing the ball forward behind the line of scrimmage to a back field player.

Huddle: Two or more players conferring between downs, or could be the whole team.

Centering: The act of putting the ball in play.

Block: Action by the offensive linemen and backs in which they use their bodies to keep the defensive players from the ball carrier.

8TH GRADE STUDY GUIDE: LACROSSE

Lacrosse is a game developed from an American Indian game played by various tribes in North America. The original game, as played by the Indians, had no fixed or definite rules. The purpose of the game was for each team to obtain possession of the ball and, holding it in a pocket carved out of a stick, carry it across a specified goal line. The game now has rules so that it is civilized and safe.

Lacrosse is played by two teams of ten players each; each team attacking the opponents' goal and defending its own. The objective of both sides is to put the ball into the opponent's goal and to prevent it from going into their own. All the running, dodging, passing, and checking tend to that end.

SAFETY

To assure student safety and to keep the game at a basic level in our physical education unit, we play a game called Stick Lacrosse, which is an adaptation of the official game. In Stick Lacrosse, there will be no goalies. Goals are placed in the middle of a 9 foot circle and no players are allowed to enter the goal circle. The team consists of three defensive players, 3 attack players and 3 mid-fielders. The rules for "Stick" Lacrosse are basically the same as for the official game, but do not allow any physical contact.

1. Never swing the crosse at any player.
2. Both hands must be on the crosse at all times.
3. No body checking at any time.
1. Clothing worn should be appropriate to weather and field conditions.
2. Students should check their crosse before participation each day.
3. Only stick checks will be allowed and only on the head of the crosse.

THE FIELD

In regulation games of Lacrosse, the game is played on a field 110 yards long and 60 yards wide. There are some lines which are very important: the out-of-bounds line, the center line, and the off-sides lines. The goal is twenty yards from the endline and is in the center of a nine foot radius circle. Only the goalie can enter this circle, known as the crease. Attack men and defense men may not go beyond the midfield line.

OBJECTIVES

The student will be able to demonstrate:

1. passing the ball accurately to a fellow teammate;
2. cradling the length of half the field with control and correct form;
3. scooping with correct form for half the lacrosse field;
4. catching the lacrosse ball in the correct form;
5. the correct knowledge, skills, techniques, terms, rules and strategy of lacrosse on a written test;
6. the ability to line-up on the field in the correct positions of mid-fielder, attack, defense, and goalie;
7. An appreciation of lacrosse and desirable social traits necessary to participate in team play.

USE AND CARE OF EQUIPMENT

1. All equipment will be stored in proper containers and storage space.
2. There will be no misuse of equipment at any time, there will be NO:
 - slamming of sticks on the ground;
 - throwing of sticks;
 - abuse of goals and balls;
 - throwing rocks with crosse;
 - One handed playing; both hands should be on the crosse at all times.

RULES

1. No attacking player may enter the goal crease.
2. Only the goal-keeper may touch the ball with his hands.
3. An out-of-bounds ball is given to the side opposite of the player who touched it last, at the spot where it went out.
4. If the ball goes out-of-bounds on a try for a goal, it goes to the player who is nearest the ball when it went out-of-bounds.
5. No unnecessary roughness or unsportsmanlike conduct is allowed.
This includes fighting, hitting the body with the stick, tripping, body-checking from the rear, or any other illegal check.
6. No player may interfere with the progress of an opponent unless the opponent has possession of the ball or both players are within five yards of a loose ball.
7. When a player commits a foul, he is put in the penalty box for a period of 1 to 3 minutes. If a team is penalized, the other team is awarded the ball.
8. The object of the game is to score goals by throwing the ball into the goal of the opposing team.

HISTORY:

The history of lacrosse goes all the way back to the Native Americans. This makes it the oldest sport in North America. Originally, the sport had its roots in the religion of Native Americans, and it was played for many cultural reasons, including healing the sick and resolving conflicts.

In 1877, the first college lacrosse team was formed at New York University. In 1882, the first high school teams were formed at the Lawrenceville School in New Jersey, Philips Academy in Andover, Mass., and Philips Exeter Academy in New Hampshire.

Until the middle of the 1930s, men's and women's lacrosse were played with the same rules. Women's lacrosse continued with basically the same rules, but men's lacrosse began to change in form and character. Today, men's and women's lacrosse are still played under different rules. The women's game prohibits body contact and limits stick contact so little protective equipment is needed. The men's game of lacrosse allows both stick and body contact but not violence.

LACROSSE POSITIONS:

Goaltender: The goalie's primary task is simple- keep the ball out of his/her own net. Offensively, he or she might start the team with a pass, but rarely leaves the net.

Defensemnen: The defense attempts to stop the offense from scoring by deflecting or intercepting passes, or forcing bad shots. Physical contact is not permitted, so the defender must do their best to use their stick to block shots and passes. Defenders play "Person-to-Person" defense, in which each player is assigned to guard a certain opponent.

Center: Center players help the defense and the offense. They must try and help score goals, as well as protect their own net from the opposing team trying to score.

Forwards: The offensive players, or the forwards, work together to score goals. Teamwork is critical. Good passing leads to scoring chances and prevents the opposition from taking possession of the ball. Field players run while cradling the ball and look to pass to open teammates with the objective of creating an open shot at the goal. Offense needs to make quick cuts and dodges to move around the defense.

DEFINITIONS:

Save: A shot blocked by the goal tender, which would have been a goal had it not been stopped._

Cradling: Running with the ball controlled inside the net. The wrist rotates back and forth in a steady and slow pace.

Grounding: Scooping the ball up from the ground using the net of the stick._

Catching: Catching the ball from a pass or a shot. The stick is held in front of the face, the dominant hand moves up towards the net, and the ball lands into the net._

Hat Trick: The scoring of three or more goals by a player in one game.

Interception: Gaining possession of a pass that was made by the opposing team.

Turn-over: When a pass is incomplete, out of bounds, dropped, blocked, or intercepted and the opposite team takes possession._

PARTS OF THE STICK:

The Shaft: the long piece of plastic that connects the butt and the head of the stick._

The Scoop: Contains the net and the head of the stick. This is where the lacrosse ball is held.

The Butt or Grip: The end of the stick, used for gripping the stick and counter balance.

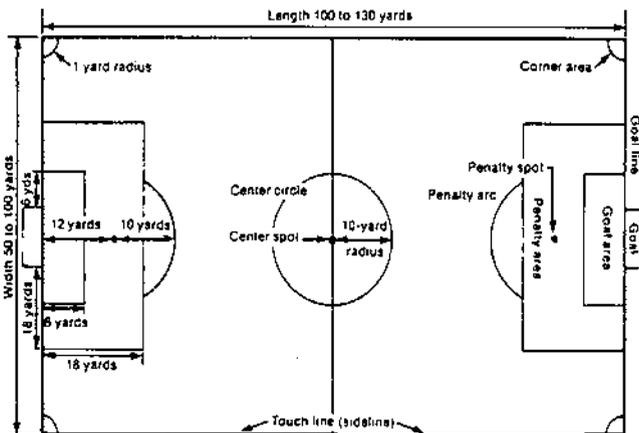
8TH GRADE STUDY GUIDE: SOCCER

GAME DESCRIPTION

The game of soccer is played with two teams, eleven players on each team. The object of the game is to advance the ball down the field and into the opponent's goal. The ball may not be touched by any part of the player's arms or hands, with the exception of the goal keeper. Players are considered offense and defense by their particular position on the field, but no player is restricted to any one position. The game is divided into four periods, called quarters or halves depending upon the age level of the players. The winning team is the one who has scored the most goals by legally advancing the ball into the opponent's goal. One point will be awarded to a team when the ball has been legally advanced into the goal. After a team has scored, the opposite team resumes play by a kick-off.

SKILLS

Dribbling	A method of advancing the ball by softly tapping it with your feet.
Drop Kick	A ball which is dropped to the ground and is kicked as it rebounds off the ground. Only the goal keeper is allowed to use this kick.
Half-Volley	Kicking the ball after a short hop, as it bounces off the ground.
Heading	Using the head to move the ball. (Not to be used in P.E. class)
Marking	Tight coverage of an opponent (man to man) with the intention of keeping the ball away from this player.
Passing	The act of moving the ball from one player to another.
Place Kick	A kick made while the ball is stationary on the ground.
Punt	A ball which is dropped and is kicked before striking the ground. Only the goal keeper is allowed to use this kick.
Screening	When in possession of the ball, a player keeps his/her body in a position between the opponent and the ball.
Tackling	Using the feet to steal the ball away from an opponent.
Throw-in	A two-handed, over-the-head throw by a player from the sideline.
Trapping	To stop or control a moving ball.
Volley	Kicking the ball while it is still in flight.



The field of play.

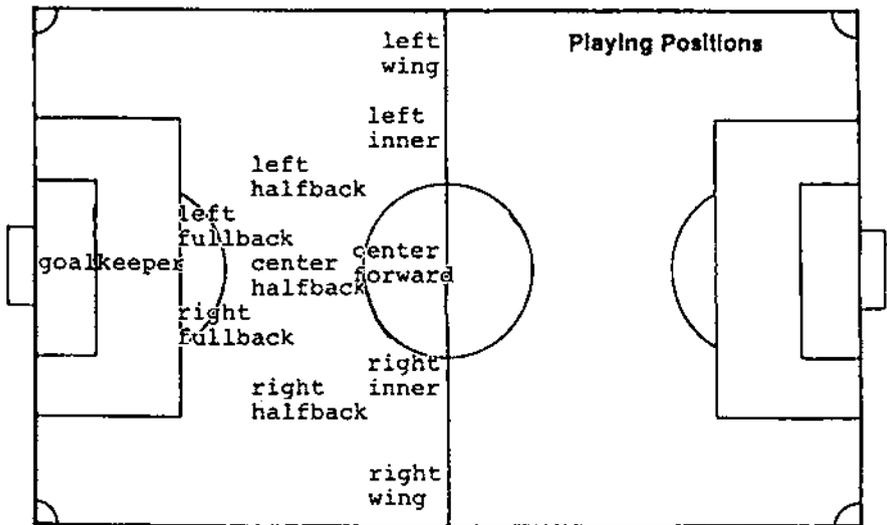
OTHER TERMS

Corner Kick	When the ball has last been played by the defending team and crosses the goal line, excluding the goal, a corner kick is awarded to the attacking team. The kick is taken from within the marking nearest the corner area. A goal may be scored from a corner kick.
Drop Ball	One method of putting the ball into play. It is a face-off between two players; as the ball is dropped between them and may be played once it hits the ground.
Hand Ball	Playing the ball with any part of the hand or arm. This is illegal for all players except the goal keeper.
Goal Kick	When a ball is last touched by the offensive team and passes over the goal line, excluding the goal, the kick is taken from nearest to where it crossed the goal line. A goal cannot be scored directly from a goal kick.
Goal Line	The line which extends from end to end between the width of the field.
Kick-Off	A method to start or restart the game. The ball must roll the distance of its circumference to be a legal kick-off. The ball must be touched by a second player before the center forward may touch it again.
Touch Line	The lines which extend lengthwise down each side of the field.
Free Kick	A kick given to a player for a foul or rule violation. It can be a direct kick or an indirect kick.
Direct Kick	A kick given to a player that may be put directly into the goal.
Indirect Kick	A kick given to a player that may not be kicked directly into the goal.
Penalty Kick	If the defending team commits a major infraction, the opposing team is awarded a penalty kick to be taken from the point of infraction. The goal keeper is not permitted to move his feet until the ball has been played upon.

PLAYING POSITIONS

Eleven players are on a team. They consist of forwards, halfbacks, fullbacks and a goal keeper.

Forwards (5)	Left wing, left inner, center, right inner, and right wing are the names associated with the forwards. Forwards occupy the front attacking positions and are the main scoring force. (A forward who concentrates on attacking the goal is sometimes referred to as a striker.)
Halfbacks (3)	Left halfback, center halfback, and right halfback. Halfbacks occupy the positions in the central portions of the field. They connect the attackers (forwards) and the defensive players (fullbacks). (Sometimes halfbacks are called midfielders.)
Fullbacks (2)	Left and right fullbacks. Defensive positions in front of the goal keeper. (Sometime a defensive player roams from side to side on the field and plays either in front of or behind the other defenders and who attempts to intercept all long passes by the opponent. This player is known as a sweeper.)
Goal Keeper (1)	The only player permitted to use his/her hands and arms when controlling the ball. The primary functions of the goal keeper are to prevent the ball from entering the goal and start the counterattack once he/she gains control of the ball.



RULES

The ball shall be put into play by:

- Kick-Off** At the beginning of each quarter/half and following goals scored.
- Throw-In** Whenever the ball goes out-of-bounds over the touch (sideline) and was not forced out by two opposing players.
- Drop Ball** Following an injury, ejection of a player, ball tied up, or the referee stops play for any reason.
- Free Kick** Following any foul or rule violation other than those already covered.
- Goal/Corner Kick** Whenever the ball crosses the goal line without entering the goal.

- If a foul is committed by the defensive team inside the penalty area, the offensive team shall be awarded a direct free kick from the penalty mark. All fouls committed outside the penalty area or inside by the offense shall constitute an indirect free kick by the team not committing the foul.
- It is a foul to hold, push, kick, or jump at an opponent intentionally or to charge in a violent or dangerous manner. A player may charge an opponent from behind provided the tackle is legal and a foul is not committed in the act of getting the ball. A player may not charge an opponent while they have both feet off the ground, jumping for the ball. Charging, in general, is permissible, as long as it is within playing distance of the two players who are attempting to get it.
- It is a foul for any player except the goal keeper to handle the ball. The goal keeper may not handle the ball outside the penalty area or take more than four steps while holding the ball.
- A player is off-side when he/she is ahead of the ball and must have two opponents, including the goal keeper between himself and the opposing goal.
- If the ball is caused to go out-of-bounds over the touch line or goal line by two opponents, it shall be put in play by a “drop ball”.

CAUTIONS AND EJECTIONS

If the referee decides to officially caution a player, he holds up a *yellow card*. The caution serves as a warning to the player that a repeat of the violation will result in expulsion from the game. When the referee holds up a *red card*, the player is ejected from the game.

8TH GRADE STUDY GUIDE: TRACK

Track Events

100 meter dash
200 meter dash
400 meter dash
800 meter dash
1600 meter run
400 meter relay
800 meter relay
1600 meter relay
100 meter hurdles (girls) 110 (boys)

Field Events

Shot Put (4.0 Kg.)
Discus (1 Kg.)
Long Jump
High Jump

Basic Rules

Participants may enter no more than 2 field, 1 track, and 1 relay or 2 track, 1 field, and 1 relay event.

Relays

400 meter relay - Each team member runs 100 meters

800 meter relay - Each team member runs 200 meters

1600 meter relay - Each team member runs 400 meters

Visual Pass - The pass used in the distance relays in which the outgoing runner visually watches the incoming runner during baton exchange.

Blind Pass - A nonvisual baton exchange used in sprint relays.

In a relay, the baton must be passed in the 20 meter exchange zone. The exchange zone is the only area in which a hand off can be made. A team that does not pass the baton in the exchange zone is disqualified. If the baton is dropped when being passed, it must be picked up by the team member who dropped it.

Hurdles

There are 10 hurdles at a length of 110 meters spaced evenly on the track. Bumping a hurdle or knocking it down does not disqualify the runner, however, it does tend to slow the runner down, and adds a penalty to him by adding time to his score. The body of the hurdler must pass over the hurdle and the feet must also pass over the hurdles instead of going around it.

Shot Put

The shot put used in Junior High weighs 4.0 kg. The circle in which the shot put is thrown is 7 feet in diameter with a wooden toe board 4 inches high. The shot is put or thrown from the shoulder-neck area with one hand only. The shot may not pass behind or below the shoulders when being put. Stepping on or over the toe board is considered a foul and disqualifies the throw. When leaving the circle, the thrower must exit from the back half of the circle or be disqualified for that throw. Throws are measured from the nearest mark.

Discus

The discus weighs 1 kg, and its diameter is slightly larger than 7 inches. The discus thrower must also exit from the rear half of the circle. The throw is measured from the mark the discus makes closest to the center edge of the throwing circle. Each competitor has 3 throws and uses the farthest throw for the event. Competitors use the side arm throw with the back or side facing the area at the start of the throw.

Long Jump

The length of the runway is unlimited. The jumper approaches and lands on the takeoff board with one foot, swinging the other foot out to extend as far as he/she can. Measurements are taken from the landing spot of the body that is nearest to the front edge of the takeoff board. If any part of the foot goes over the takeoff board it is considered a scratch and is not measured. Each long jumper is allowed 3 jumps with the farthest jump being used for the event.

High Jump

High jump competitors may begin jumping at the starting height or may pass at any height. 3 failures at the same height disqualify the jumper. When jumping, the athlete must take off on one foot. Knocking the bar down and placing the foot under the bar are considered a miss. The number of times a high jumper misses is an important factor when breaking a tie.

8TH GRADE STUDY GUIDE: SPEEDBALL

Speedball is a combination sport that includes *football*, *soccer*, and *basketball*. Speedball can be played indoors or outdoors. A speedball field is set up just like a football field. There is an end zone at the end of each side of the field with goals in the middle of each end zone. An indoor soccer ball will be used for class.

SCORING

After a team scores, the ball goes to the goalie that just got scored on.

There are four ways to score in speedball.

1. Complete a pass for a touchdown – 2 points
(In order for the touchdown to count the person throwing the ball must throw the ball from behind the free throw line extended.)
2. Kick the ball into the goal – 3 points
3. Throw the ball into the goal – 1 point
4. Make a basket outside the goalie's box – 2 points

PLAYERS

- There are eight players in a game at a time: **3 offensive, 3 defensive, 1 goalie, 1 center**
- The goalie, offensive and defensive players are limited to half court zones. The center can go anywhere within the court.

MOVING THE BALL

1. Pass the ball using your hands like in football.
2. Dribble or pass the ball using your feet like in soccer.

In order to get the ball from the ground to your hands you must kick the ball up to either yourself or to a teammate and they must catch it. This technique is known as a **“conversion.”**

When the ball is in your hands, you can pass back and forth to your teammates as long as you want, but you are not allowed to run with the ball. Like in basketball, you must keep a pivot foot at all times.

Once the ball touches the floor, you must **“convert”** the ball again in order to handle it with your hands, unless it bounces over your head. Then, you can grab it.

If the ball goes out of bounds, one of the players on the sideline will perform a soccer throw-in to a teammate.

VIOLATIONS

Hand ball: Touching the ball with your hands, without **“converting”**

Attacking in the goalies box: Trying to kick or throw the ball into the goal or trying to shoot a basket while standing in the goalies box

Illegal throw in: Throwing the ball into the field of play without using a proper soccer throw in

Offside: Crossing out of the zone that your position is limited to

Traveling: Moving with the ball or dragging your pivot foot

Pass interference: Pushing or interfering with a player trying to make a catch

Rough play: Playing out of control or without regard for safety of other players.

Each of these violations will result in a penalty kick against the penalized team.

8TH GRADE STUDY GUIDE: VOLLEYBALL

Volleyball is a fun game which can be played and enjoyed for a lifetime at a variety of levels, from recreational to competitive. Played either inside or outdoors, the game has many variations; the traditional six person team, co-ed, fours, triples and doubles (used in beach volleyball). The game improves quickness, lateral movement (to strengthen knees), and jumping ability.

TERMINOLOGY:

1. **Block:** An overhead defensive move used to prevent a spike from penetrating the net. Both arms are overhead, with forearms and hands used to deflect the ball back into the spiker's court.
2. **Bump:** Also known as a forearm pass, it is a single, simultaneous contact off of the forearms. It is used to receive serve, dig spiked balls, and for ball contact below the waist.
3. **Set:** A two handed overhead contact with open hands used to position the ball for the spiker. The ball cannot come to rest on the hands and a slapping motion cannot be used.
4. **Serve:** A one handed contact in which the ball must go over the net, inbound used to begin play. A serve which touches the net and goes over is legal and in play. An underhand or overhand motion may be used. Both feet must be completely behind the baseline. You may score points when you serve or when you receive serve.
5. **Side-Out:** The ball is awarded to the defensive team when the serving team violates a rule. One point is scored on a side-out.
6. **Spike:** A forceful one-handed attack, hit above the level of the net, used to terminate play. The ball must be contacted on your side of the net, but follow through may occur over the net as long as no contact is made with the net. The ball must be cleanly hit, not slapped or thrown.
7. **Tip:** A soft overhead hit, one or two handed, used to deceive opponents. Tips are used primarily when the ball is close to the net, or when you face a strong blocker.

SAFETY

The majority of volleyball injuries occur when one player lands on another player's foot. Position yourself so that when you land, both of your feet remain on your side of the center line.

RULES:

1. Either team may score on a serve. The serve must be over the net, and land within the boundaries of the court. On the line is good.
2. The server is the right back player, however, he/she may serve from anywhere behind the baseline.
3. Rotation for the six player team is clockwise.
4. A player may step on, but not over the center line.
5. A team is allowed three hits per side, and no player may hit the ball twice in succession. A block does not count as a hit.
6. Illegal hits are defined as any ball which comes to rest, is slapped or thrown, or an openhanded hit below the waist.
7. You may only spike if you are a front row player.
8. You may legally play a ball out of the net.
9. The desired offensive sequence is bump, set, spike.
10. Serving team should announce their score first.

OUT OF BOUNDS:

1. Ceiling or objects attached to the opponent's side.
2. Ball which hits outside line (on the line is good).
3. The ball must be between the antennae or the poles of the court on all returns.

7TH/8TH GRADE STUDY GUIDE: WEIGHT LIFTING/FITNESS



BENEFITS:

- Increases speed
- Increases flexibility
- Increases strength
- Increases metabolism
- Increases muscular endurance
- Increase, decrease, or maintain body weight
- Prevents or reduces injuries
- Reduces fatigue, gives body more energy
- Strong back and abdominal muscles can help prevent low back pain

For our program, strength training is a unit of study in which a person increases her/his ability to lift heavy objects a few repetitions or one time (**muscular strength**) or the ability to lift an object or objects repeatedly for a long period of time (**muscular endurance**). Muscle shape has a lot to do with how someone looks because it gives the body its basic form and shape. The statement about muscle, “that you lost it if you don’t use it!” is evident when a person has a broken arm placed in a cast. After three to five weeks when the cast is removed, the muscle is small and shriveled up or atrophied. An amazing fact is that men in their mid-to-late twenties begin to lose muscle tissue at the rate of one-half pound per year. While the same studies for females are not available, it is generally assumed that women lose less muscle mass but they too lose it without use!

The gradual loss of muscle tissue during the aging process can be prevented by a regular program of strength training. Muscle mass plays a big part in metabolism since muscle tissue burns more calories than fat tissue. Strength training should therefore, be a regular phase of everyone’s physical fitness program. Few individuals have the time or capacity to develop large bulky muscles, but almost everyone can maintain his/her muscle mass into middle age by participating in a regular strength training program.

REMEMBER THESE WEIGHT TRAINING SUGGESTIONS:

1. Start at the right level: If you have not lifted recently, start slowly and look to improve over a six to eight week time period.
2. Always warm-up and cool-down before and after lifting: These pre and post exercise habits will minimize the chances for injury and help prevent muscle soreness.
3. Always use proper lifting technique: Use a weight that allows you to perform the movement correctly rather than cheat your way through a set with excessive weight. Proper technique includes lifting through a full range of motion in all lifts. Slow and controlled repetitions produce the best results (not throwing the weight). Do not hold your breath while lifting. Exhale on the positive or lifting phase and inhale on the negative phase.
4. Train the larger muscles first: Exercise your larger muscles first. Start with the chest and back muscles. The abdominal muscles (including the obliques) can be worked out every day.
5. Sets and repetitions: When just starting to work out, perform at least two sets of each lift and complete 8-12 repetitions without reaching a **point of failure**. As time passes and you gain strength, increase your workout to three sets of each lift and 8-12 repetitions or less and reach a point of failure (a set in which you cannot complete the last repetition).

6. Challenge your muscles: Strength occurs when muscles are required to work at an increased workload or “**progressive overload**.” As time passes during the training period, continue to increase your workload and the body will adapt to the new demands placed upon it. These increases may be slight -again, do not try to do too much. In order to make strength gains, try to lift at least three times per week. In order to maintain strength, lift at least two times per week.
7. Allow 48 hours between workouts of any muscle group: You will get the most out of a strength training program if you rest your muscles 48 hours between sessions. During a training workout, you break down many muscle cells and your body needs 48 hours to re-build tissue so give it time.
8. Remember the difference between strength training and endurance training:

Strength Training = Fewer repetitions and more weight.

Endurance Training = More repetitions and lighter weight.

The following weight training fundamentals will be emphasized in the Freshman Physical Education Curriculum:

1. Lifting form and posture (spinal alignment)
 - Bend at hips/knee when picking something up
 - Keep head up and ears over shoulders
 - Chest over knees and knees behind toes
 - Keep head and gluteus maximus on bench - feet flat on floor
2. Breathing Technique:
 - Breath in (inhale) on negative phase (eccentric)
 - Breath out (exhale) on positive phase (concentric)
3. Safety Considerations:
 - Utilize a spotter • Use spring collars provided
 - Do not lift over head while standing
 - Use belts if performing squats or power cleans
 - Do not drop weights or plates
 - Stack weight plates and strip bars and put dumbbells back after using.
 - Slow controlled repetitions are more beneficial than fast movements. Control what is lifted. Some sources say to take two seconds to lift the weight (positive phase) and four seconds to return the weight to its original position (negative phase)
4. Strength Training:
 - Low reps
 - Heavy weight
5. Endurance Training:
 - High reps
 - Light weight

6. The Overload Principle:

- In order to increase strength, you must exercise until muscular fatigue; unable to perform another repetition with proper form. You then may ask your spotter to assist you with additional reps.

Muscle Actions - Exercises

MUSCLE	MOTION	EXERCISE
Bicep	Flexes arm	Bicep curls
Tricep	Extends arm	Tricep extension
Deltoid	Moves arms away from body	Military press
Lats	Moves arms toward body	Lat pulls
Pectorals	Pushing motion	Bench
Abdominals	Flex torso	Curl-ups
Obliques	Rotate torso	Twisting curl-up
Quadriiceps	Extend knee	Leg extension
Hamstrings	Flex knee	Leg curls
Gluteals	Extend hip	Lunges/Squats
Trapezius	Elevates Shoulders	Upright Rows
Gastrocnemius	Extends Foot	Toe Raises

7. Range of Motion:

- A properly executed lift should be done with a full range of motion

8. Weight Room Considerations:

- Strip bars
- Pick-up/put away plates/dumbbells
- No food/drink/gum
- No horseplay
- Safety first always

RULES AND SAFETY:

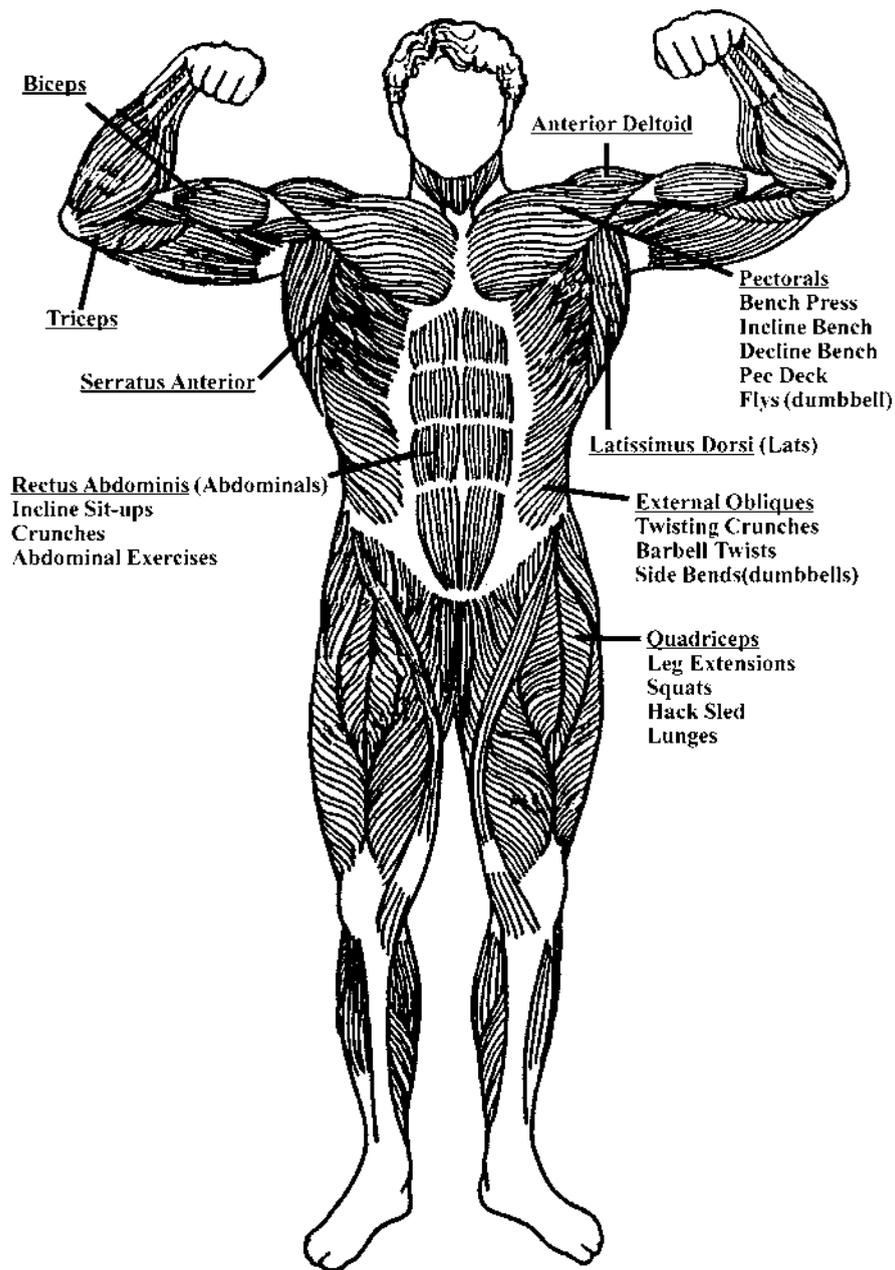
1. Review of Alignment and Technique:

- a. keep back straight, head and chest up, shoulders back, abs and buttocks tight
- b. try to keep shoulders aligned over hips, lean forward with entire body, don't bend from the hips or round the shoulder
- c. step lightly making sure the entire foot lands on the platform with the heel bearing your weight
- d. don't BOUNCE
- e. keep the knees soft and aligned over feet
- f. stay close to the platform and glance at the step every now and then

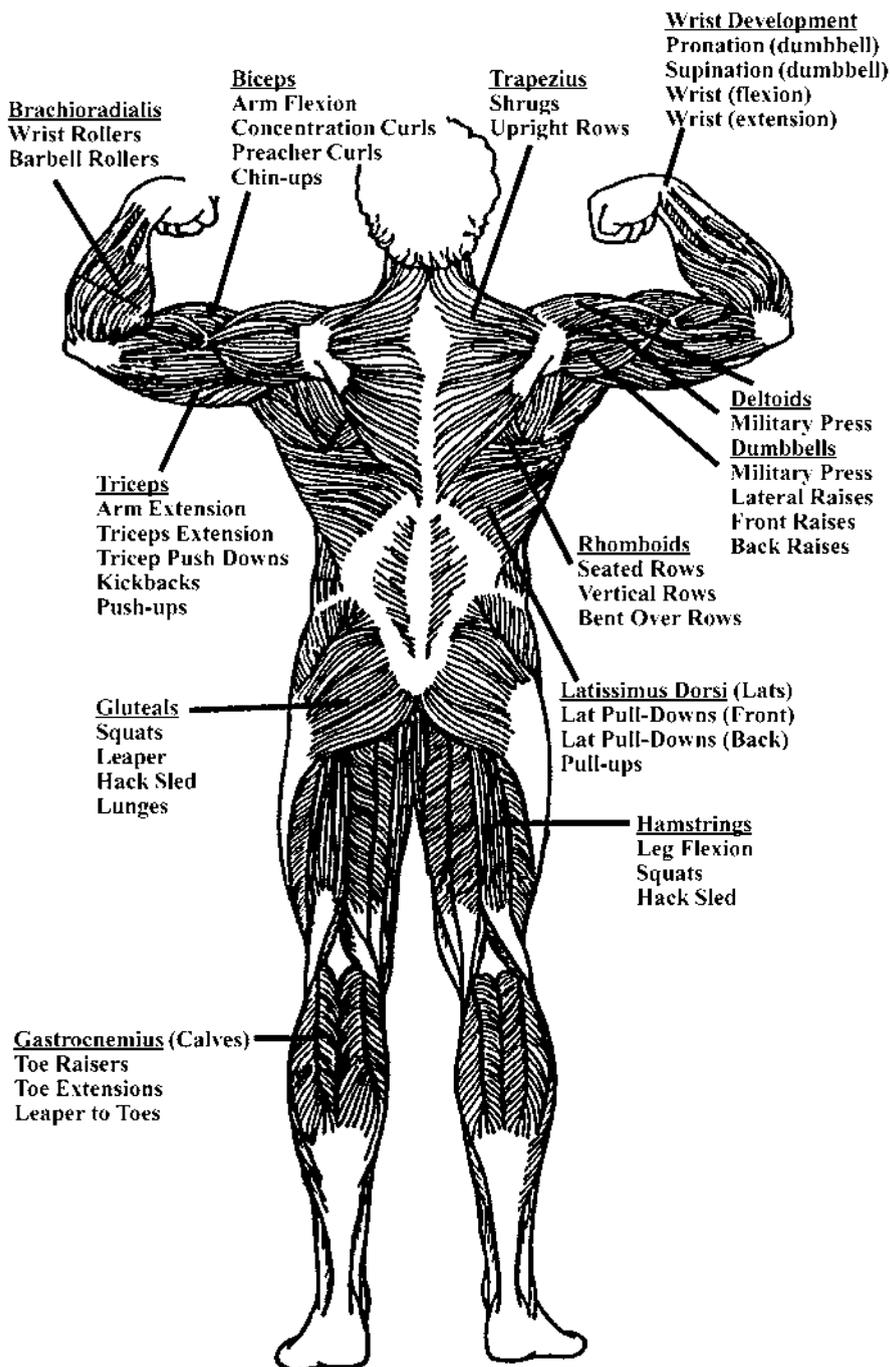
2. Putting it all together.

- a. always begin with the base moves, master the legs/feet first
- b. add arm patterns
- c. continue breakdown and add variations to base moves, let your students know they can always stay with the level they feel most comfortable doing
- d. finally add rhythm changes and style modifications

MUSCLE GROUPS - Front



MUSCLE GROUPS - Back



EXERCISE

MUSCLE(S) DEVELOPED

BICEP CURLS



Biceps (Belly)

Lifting Procedure

1. Sit or stand, hold weight palms forward
2. Lift weight bending elbow
3. Return to start position

HAMMER CURLS



Biceps (Length)

Lifting Procedure

1. Same as biceps curl action
2. Turn hand so that thumb/index finger are forward

FOREARM CURLS



Brachialis (forearm)

1. Same as bicep curl action
2. Palms are facing backward
3. Bend elbow using full (R.O.M.)

TRICEPS EXTENSION



Triceps

Lifting Procedure

1. Hold weight in hand
2. Position arm overhead, elbow bent, as shown.
3. Straighten arm
4. Return to start position and repeat

TRICEPS KICKBACKS



Triceps

Lifting Procedure

1. Stand, leaning over chair or table, arm back, elbow bent, as shown
2. Hold weight in hand
3. Straighten elbow through available range
4. Return to start position

MILITARY PRESS

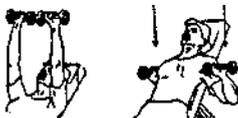


Deltoids, Triceps

Lifting Procedure

1. Sit or stand
2. Hold weights in hands, arms at side, elbows bent, as shown
3. Lift weights up and overhead
4. Return to start position and repeat

BENCH PRESS



Pectorals, Triceps, Deltoids

Lifting Procedure

1. Lie on bench or exercise ball
2. Grasp dumbbells palms forward
3. Press dumbbells to extended arm position
4. Return to original position and repeat

EXERCISE

FLYS / EXERCISE BALL



STANDING (HORIZONTAL LIFT)



BENT OVER ROW



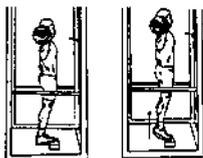
LUNGES



SQUATS



CALF RAISES



MUSCLE(S) DEVELOPED

Pectorals

Lifting Procedure

1. Dumbbells in hands, arm extended
2. Keep elbows slightly bent
3. Bring dumbbells together above chest
4. Repeat

Pectorals

Lifting Procedure

1. Stand with arms out to sides, elbows straight
2. Hold weights in hands
3. Lift up to middle, keeping elbows straight
4. Return to start position and repeat

Lats – Rhomboids

Lifting Procedure

1. Stand, leaning over chair or table, arm back, elbow bent, as shown.
2. Hold weight in hand.
3. Straighten elbow through available range.
4. Return to start position.

Hamstring, Quadriceps, Gluteals

Lifting Procedure

1. Hold dumbbells along side
2. Legs together to start – step forward
3. Keep lead knee and foot aligned and toes straight ahead
4. Flex the knee slowly and under control
5. Keep lead knee directly over lead foot
6. Return to starting position and repeat

Hamstrings, Quadriceps, Gluteals

Lifting procedure

1. Hold dumbbells at shoulder height
2. Feet shoulder width apart
3. Keep weight on middle of foot and heels, not toes
4. Slowly lower hips until tops of thighs are parallel to floor
5. Slowly return to up position and repeat

Gastrocnemius, Soleus

Lifting Procedure

1. Hold dumbbells at shoulder height
2. Feet shoulder width apart
3. Position balls of feet on edge of raised surface
4. Push up on toes as high as possible in a slow manner
5. Return to floor with heels and repeat

THE STATE OF YOUTH FITNESS

Many medical and fitness organizations have prepared position statements regarding the fitness levels of today's youth. The American Academy of Pediatrics states that children are not as fit today as they were 20 years ago. Financial strains and back-to-basics trend in schools, the lure of television, and the difficulty in motivating children to exercise for their health all work against the health-related fitness movement. Pediatricians must, therefore, appeal to schools to maintain, if not increase, their physical education programs, and encourage family involvement in fitness activities at home.

On the whole, states the American Academy of Family Physicians, children are not physically fit. All children in all grades should have access to daily physical education and to structured physical activity in the schools. Students should undergo fitness testing twice a year and receive remedial attention, if necessary.

The President's Council on Physical Fitness and Sports states that children are not as physically fit as they should be. Although there has been no basic change in children's fitness levels over the last ten years, children are not as fit as they could be. Fitness testing is an important part of physical education programs, to the extent that it gauges individual programs toward a desired goal.

Recent studies have also painted a grim picture of the state of fitness in our youth:

- A study of 12,000 youths sponsored by the Amateur Athletic Union and the Chrysler Corporation showed that only 32% of children aged 6 to 17 met minimal standards for cardiovascular fitness, flexibility and abdominal and upper body strength. These findings represented a decline from 1981 in which 43% were considered to be in acceptable shape.
- Thirty-seven percent of children are considered fit, according to a 1990 study prepared by the US Center for Disease Control. The study found that the number of children who vigorously exercise three or more times per week has dropped nearly 40% since 1984.
- A recent report from the President's Council on Physical Fitness and Sports shows that a third of all boys from age 6 to 12 and 50% of girls ages 6 to 17 cannot run a mile faster than walking speed, about 10 minutes. More than 50% of the girls and 25% of the boys cannot do a single pull-up. Forty percent of the boys could only do one. Children age 5 to 8 are already exhibiting major coronary risk factors including obesity, high blood pressure, high cholesterol levels and low cardiovascular efficiency.
- It has been concluded at the Institute for Aerobics Research that because of poor fitness, at least 30 to 35% of the school age population are at risk for early heart or circulatory disease and premature death as adults.
- A 1987 study by the US Public Health Service found that obesity has increased 9% among children 6 to 11 years old and 6% among children 12 to 17 years old during the last 20 years.

The question is, "Is it a lack of fitness or fatness which has created this problem?" It is more than even those. Another major cause for these problems is the home atmosphere created by the parents. Parents are potentially the most influential role models for their children. They must constantly monitor their child's educational and fitness programs and nurture each. This is presently not the case as discovered from a recent Harris poll for Prevention magazine which found that 85% of the parents surveyed said their children were physically fit!

A major culprit in most home environments is the television. Most kids are involved in watching TV or playing video games as prime leisure or after school activities. American children aged 2 to 5 watch an average of 25.5 hours of television per week. Children 6 to 11 spend nearly 23 hours a week watching TV. Related to this habit is the fact that food is also the most heavily advertised product during children's programming. Children see more than 11,000 low nutrition junk food ads a year. In these commercials, 95% of the characters are thin or of average weight, 5% are overweight or obese. The message in these ads is, "Eat anything you want, and get away with it. Needless to say, growing up in the 80's and 90's is different than ever before. Many kids are out of shape, they are fatter and have developed poor lifestyle habits. What can be done to attack these problems? The following suggestions are made to get a high percentage of our children back on the road to a healthy lifestyle.

WHAT CAN BE DONE TO IMPROVE FITNESS LEVELS

1. Parents need to set a good example for their children. This means that parents must serve as role models by being involved in their own regular exercise program. Parents need to show their children that regular exercise is a priority, that it helps relieve stress, and helps you look and feel better.
2. Limit the family's intake of fast food. Try to minimize fast food purchases to once a week and three times a month. Help your children to choose low-fat foods and nutritious selections: an important nutritional habit to establish is to encourage children to eat a large breakfast everyday which would include a whole grain cereal, a fruit juice (vitamin C) and whole wheat toast or a bagel.
3. Limit TV and VCR use to one hour per day. Noted in the context of this article the use of TV, VCR and video games must be limited.
4. Get involved in your child's health and fitness development. Support and encourage your child's efforts in the area of physical development. Do so by organizing family fitness outings which may include walking, jogging, hiking, bicycling, tennis, basketball, swimming, bowling, ping pong, ice-skating, golf, Frisbee, etc. Parents can also help coach or supervise youth activities offered in the community or informal activities. According to a 1986 report in *The Physicians and Sports Medicine*, "parental support was the major factor that influences the child's interest in participation" in two child fitness studies.
5. Do not force your child to play competitive sports. Emphasize fun and fitness, not winning and hard work. A 1987 report from the *Research Quarterly* completed by a group of researchers from the University of Texas concluded that, "activities must be highly enjoyable, thereby fostering positive attitudes towards physical activity that may carry over into adulthood."
6. Lobby for better school Physical Education programs. Find out what your schools are doing to promote, evaluate, develop and promote health-related fitness. Health related fitness tests should be administered at least twice a year. These tests would show whether children are basically healthy or not. These tests are not designed to measure athletic ability or fitness levels that accompany high level conditioning. The health-related battery of tests should include measurement in each of the following areas:
 - Aerobic or cardiovascular endurance capacity
 - Muscular strength
 - Muscular endurance
 - Flexibility
 - Body composition

Motivating young people to attain minimal levels of these components will not be an easy task to complete. It will take a great deal of effort and communication between parents, teachers, recreation directors, coaches, doctors and students to make significant gains. Unless we concentrate on the deficiencies in the lifestyles of our children, there is no way that we can expect to see further improvement in the health, quality of life and longevity of our growing population.

AEROBIC EXERCISE

Aerobic exercises are those which demand large quantities of oxygen for prolonged periods and ultimately force the body to improve those systems which transport oxygen. Aerobic exercises use the large muscles of the lower body including the quadriceps, (front of upper leg), hamstrings, (back of upper leg) and gluteal muscles (buttocks). This kind of exercise characteristically involves covering long, slow distances rather than short bursts of speed. It also gets the participant warm and breathing without being really out of breath. The physical benefits associated with aerobic exercise include the following:

- The total blood volume increases so that the body is better trained to transport oxygen.
- Lung capacity increases and this increased capacity to deliver oxygen is associated with a greater longevity.
- The heart muscle grows stronger and with each heart beat there is an increased stroke volume which pumps more oxygenated blood through the circulatory system.
- HDL, or High Density Lipoprotein, increases as a result of aerobic exercise. This “good” cholesterol helps reduce the potential for developing atherosclerosis, or hardening of the arteries.
- Aerobic exercise promotes strong and healthy bones. Bone strength is related to levels of physical activity. Bone, like muscle, tends to get stronger and thicker the more it is exercised.

Examples of potential aerobic exercises are listed below:

Walking/walking with hand held weights, Stationary bicycle, Slow jogging, Rowing machine, Bicycling, Treadmill, Hiking, Stair climbing, Cross-country skiing, Cross-country ski machine, Roller Blading, Video tape: a. aerobic dance b. step aerobics, Long distance swimming (laps), Running

- Other activities such as tennis or basketball may be aerobic if the participant is continuously moving and elevates the heart rate to the appropriate level. The more one exercises aerobically, the more oxygen delivered. Train often enough, at the appropriate intensity, and watch the fat go away. Twenty-one percent of the air we breathe is oxygen. How much of that percentage the body can deliver to the body’s cells determines the amount of fat burned. Aerobic exercise can also increase the body’s metabolism. A sedentary person has a lower fat burning capacity than an active person. It is in part due to the active aerobic person having a higher metabolism. Thus, the greater aerobic capacity a person develops, the higher the metabolism.

Cardiovascular disease is the number one killer in the United States. Many of these deaths are due to inactivity and poor personal lifestyle habits. Most of these are preventable. One way to help prevent the onset of heart disease is to participate in regular aerobic exercise.

The secret to maximizing the benefits of aerobic exercise is to follow the F.I.T.T. principles. F.I.T.T. is an acronym for four important aspects of an aerobics exercise program.

- **F = Frequency:** People should exercise at least 3-5 times per week for beneficial results. Aerobic exercise less than three days will not help develop or maintain fitness. Getting more than five days of aerobic exercise will help burn additional calories but there is a greater risk of injury if the body does not have time off to rest.
- **I = Intensity:** The appropriate intensity or pace for aerobic exercise is determined by monitoring your exercising heart rate (pulse). A simple procedure is to stop exercising every ten minutes and immediately count your pulse. (Count your pulse at the radial artery located at the base of the wrist below the thumb using the middle and index finger to gently feel for the pulse).

Researchers have found that if individuals keep their heart rate within a certain range for 15 to 60 minutes, the exercise they do can contribute to cardiovascular fitness. This range is known as the Target Heart Rate. A simple way to check for Target Heart Rate:

1. Every five or ten minutes, stop exercising and immediately count your pulse for 6 seconds.
2. Your pace should fall within the range given below for your age group. (If your pulse is lower, increase your pace; if it is above the total shown, slow down).

Age	Your Target Zone
20's	14-17 beats/6 seconds
30's	13-16 beats/6 seconds
40's	12-15 beats/6 seconds
50's	12-14 beats/6 seconds
60's	11-13 beats/6 seconds
70's	10-12 beats/6 seconds

- **T - Time:** Clinical studies have shown that is necessary to keep the heart (pulse) rate in the target zone for at least 15-30 minutes for cardiovascular benefits. The key is that the exercise is continuous and not be of a stop and go variety. Weight watchers should plan on getting at least 30-60 minutes of exercise each session for burning the additional calories they may want to burn.
- **T - Type:** Vary the type of exercise you engage in. Include exercise which develops cardiovascular endurance, muscular strength, muscular endurance, flexibility and improves your body composition.

BEFORE STARTING AN EXERCISE PROGRAM

1. Do not limit your exercise to only aerobic exercise. Incorporate isotonic (weight bearing) exercises such as weight training and calisthenics (push-ups and sit-ups) as well as flexibility exercises to supplement the aerobic phase.
2. If an individual is thirty-five years or older and has not exercised regularly, a medical exam should be completed before embarking on an exercise program. This might include a stress test to measure cardiovascular efficiency and a blood test to check cholesterol, HDL, LDL, triglyceride levels, etc.
3. Remember to exercise aerobically using a “conversational pace. “That is, be able to talk with someone while exercising. Maintain the long, slow, distance approach to improve cardiovascular endurance.
4. Aerobic exercise is analogous to an oil change for your car in that it too, removes waste products and regenerates the system with a fresh ingredient, in this case; oxygen.
5. Do not expect immediate results. It will take at least six weeks of regular exercise using the F.I.T.T. principles to see results. Be patient and stick to it.

SELF EVALUATION - 12 MINUTE RUN

Doing the 12 minute run:

- To take the test, run or jog as far as you can in 12 minutes.
- The farther you run the better your score. Your score is the amount of distance you cover in 12 minutes. Measure to the nearest 20 yards.
- As you take the test, try to set a pace that you can keep up for all 12 minutes of the run. A steady pace is best. If you start fast and then have to slow down at the end, you will probably not be able to run as far as you could if you ran a slower, steadier pace for the full 12 minutes.
- The 12 minute run is taken for your own information. It is not a race. It is true that you should do your best so that you will know your level of cardiovascular fitness. But it is no disgrace if you cannot run as far as someone else. You should try to work to improve your fitness so you can do better the next time you take the test.
- Write your score in the chart on your self-evaluation record sheet.
- When you record your results, use the first part of the chart only. You are only expected to do this test once in class unless your instructor tells you otherwise.
- Check your score on the rating chart for your sex, and write your rating on the Cardiovascular Fitness Scores chart.

RATING CHART: 12-MINUTE RUN

Number of yards						
	13-14 yrs.		15-16 yrs.		17-20 yrs.	
Rating	men	women	men	women	men	women
Excellent	3000	2100	3100	2300	3350	2600
Good	2650	1900	2800	2100	3000	2300
Fair	2500	1800	2600	1900	2800	2000
Needs Improvement	2400	1700	2500	1700	2600	1700

12 MINUTE RUN-YARDAGE BREAKDOWN

LAPS	YARDS COVERED	LAPS	YARDS COVERED
4	1760	6	2640
4-1/4	1870	6-1/4	2750
4-1/2	1980	6-1/2	2860
4-3/4	2090	6-3/4	2970
5	2200	7	3080
5-1/4	2310	7-1/4	3190
5-1/2	2420	7-1/2	3300
5-3/4	2530	7-3/4	3410

A TEST FOR RECOVERY FROM EFFORT

1. Take your pulse, sitting;
2. Climb a flight of stairs;
3. Take our pulse again.

If your heart is fit, your pulse after climbing the stairs will be around 88 to 90 beats per minute. If you're out of shape, it can zoom to 160. Anything over 90 needs improvement.

A QUICK RECOVERY TEST

1. Take your pulse, sitting, to determine your normal heart rate.
2. Run in place for fifteen seconds.
3. Sit down and take your pulse, noting how long it takes to return to normal. If it is back to normal in 30 seconds -*EXCELLENT*:
 - 60 seconds - *GOOD*
 - 120 seconds - *FAIR*
 - from 120 to 189 seconds - *POOR*

If your heart rate is slower after exercise, tell your doctor.

JOG IN-PLACE TEST

A popular test used at the Cleveland YMCA requires a one-minute period of jogging. It's probably as accurate as any short test can be.

1. Run in place briskly for one minute.
2. Stop, sit, and take your pulse for fifteen seconds. Multiply by four to get your pulse rate per minute.

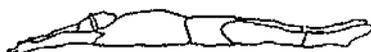
Your rating:	
84 to 96 beats per minute	<i>VERY GOOD</i>
102 to 114	<i>ABOVE AVERAGE</i>
120 to 132	<i>AVERAGE</i>
138 to 149	<i>BELOW AVERAGE</i>
150 to 161	<i>POOR</i>
162 and up	<i>VERY POOR</i>

To use your pulse rate as a kind of exercise thermostat, you need to know:

1. Your resting heart rate (sitting)
2. Your maximum heart rate
3. Your heart reserve - which is the difference between the resting rate and the maximum rate.

Exercises for the Abdominal Muscles

The following descriptions and pictures will show you a three part stomach routine to work all of your stomach muscles. If your stomach gets tight during or after the exercises, perform a full body stretch as shown below to relieve tightness.



The first exercise is called the **AB CURL**. Start on your back with the knees bent, feet flat and hands across your chest (Fig. 1a). Curl up by bringing your shoulder blades off the mat approximately 30 degrees (Fig. 1b) and then lower yourself back downward (Fig. 1c)

Do not throw your head up but keep your head and neck in a stable position. When you lower your upper body you do not have to lower the back of your head all the way to the ground before doing another repetition.



1a.



1b.



1c.

The second exercise is the **ELBOW TO KNEE AB CURL**. It is the same starting position as the first exercise except that you interlace your fingers behind your head and raise your feet off of the floor. As in the first exercise raise your upper body 30 degrees off the mat (Fig. 2a) and then bring both of your elbows toward your knees, touching about two inches above the knees (Fig. 2b). As you uncurl, lower yourself as in (Fig. 2c) and then repeat action as in (Fig. 2b) to work the upper and lower abdominals. Do not lower your feet too far and create an arch in the lower back. Keep the lower back flat at all times during abdominal work.



2a.



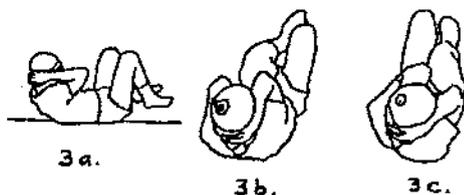
2b.



2c.

The third exercise is called the **TWISTING ELBOW-KNEE AB CURL**. The starting position is the same as the elbow-knee ab curl above. Raise your shoulder blades and feet off the mat (Fig. 3a) and alternate touching your right elbow to left knee (Fig. 3b) and then left elbow to right knee (Fig. 3c). Keep your upper body in a flexed position during this exercise. The movement of the knees should be forward and back as you would do when riding a bike. Move the upper body slightly side to side, but do not let

your knees cross the midline (middle) of your body. Relax your ankles when doing these last two exercises.



Exercises for the Arms and Chest

Knee push-ups are very good for upper body development and maintaining muscle tone. Different exercises can be performed to work various parts of the arms and chest. Starting position is on the hands and knees. The hands are on the ground parallel to each other and a little more than shoulder width apart (Fig. 4a). The wider your hands the more you work the chest muscles. The push-up should be completed by lowering your body straight down until you barely touch your chest (Fig.4b) Whether doing regular push-ups or knee push-ups you must keep your back straight and your posterior from sticking up in the air.



If you want to develop the back of the upper arm (triceps), place your hands shoulder width apart and keep your elbows close to your body (Fig 5a). As you perform this exercise do not let your elbows bow out, but keep them almost directly over your hands and next to the sides of your body. To develop the pectorals, widen your hands, but maintain good body posture (head up, back flat and posterior down) (Fig 5b)



After doing push-ups, stretching in any of the positions shown below will loosen the muscles used.



AMERICAN HEART ASSOCIATION
DIETARY GUIDELINES: AT-A-GLANCE

1. **Achieve an overall healthy eating pattern.**
 - Choose an overall balanced diet with foods from all major food groups, emphasizing fruits, vegetables and grains.
 - Consume a variety of fruits, vegetables and grain products
 - At least 5 daily servings of fruits and vegetables
 - At least 6 daily servings of grain products, including whole grains.
 - Include fat-free and low-fat dairy products, fish, legumes, poultry and lean meats.
 - Eat at least two servings of fish per week.
2. **Achieve a healthy body weight.**
 - Avoid excess intake of calories.
 - Maintain a level of physical activity that achieves fitness and balances energy expenditure with caloric intake; for weight reduction, expenditure should exceed intake.
 - Limit foods that are high in calories and/or low in nutritional quality, including those with a high amount of added sugar.
3. **Achieve a desirable cholesterol level.**
 - Limit foods with a high content of saturated fat and cholesterol. Substitute with grains and unsaturated fat from vegetables, fish, legumes and nuts.
 - Limit cholesterol to 300 milligrams (mg) a day for the general population, and 200 mg a day for those with heart disease or its risk factors.
 - Limit *trans* fatty acids. *Trans* fatty acids are found in foods containing partially hydrogenated vegetable oils such as packaged cookies, crackers and other baked goods; commercially prepared fried foods and some margarines.
4. **Achieve a desirable blood pressure level.**
 - Limit salt intake to less than 6 grams (2,400 mg sodium) per day, slightly more than one teaspoon a day.
 - If you drink, limit alcohol consumption to no more than one drink per day for women and two drinks per day for men.

Anatomy of MyPyramid

One size doesn't fit all

USDA's new MyPyramid symbolizes a personalized approach to healthy eating and physical activity. The symbol has been designed to be simple. It has been developed to remind consumers to make healthy food choices and to be active every day. The different parts of the symbol are described below.

Activity

Activity is represented by the steps and the person climbing them, as a reminder of the importance of daily physical activity.

Moderation

Moderation is represented by the narrowing of each food group from bottom to top. The wider base stands for foods with little or no solid fats or added sugars. These should be selected more often. The narrower top area stands for foods containing more added sugars and solid fats. The more active you are, the more of these foods can fit into your diet.

Personalization

Personalization is shown by the person on the steps, the slogan, and the URL. Find the kinds and amounts of food to eat each day at MyPyramid.gov.

Proportionality

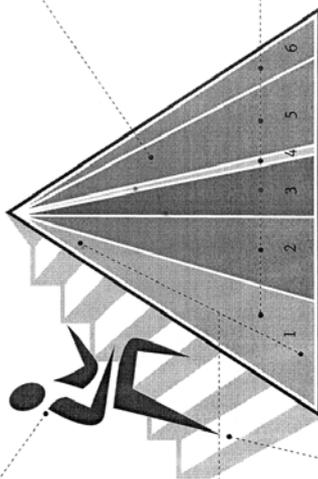
Proportionality is shown by the different widths of the food group bands. The widths suggest how much food a person should choose from each group. The widths are just a general guide, not exact proportions. Check the Web site for how much is right for you.

Variety

Variety is symbolized by the 6 color bands representing the 5 food groups of the Pyramid and oils. This illustrates that foods from all groups are needed each day for good health.

Gradual Improvement

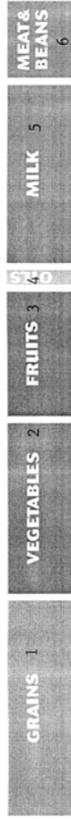
Gradual improvement is encouraged by the slogan. It suggests that individuals can benefit from taking small steps to improve their diet and lifestyle each day.



MyPyramid.gov
STEPS TO A HEALTHIER YOU

USDA U.S. Department of Agriculture
Center for Nutrition Policy
April 2005 CNPP-16

USDA is an equal opportunity provider and employer.



NAME _____

DATE _____ DAY - S M T W T H F SA

DAILY NUTRITIONAL CHART

FOOD PYRAMID

9-11 Servings Bread, Rice, Cereal, Pasta

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

3-5 Servings – Vegetables

- 1
- 2
- 3
- 4
- 5

2-4 Servings – Fruit Group

- 1
- 2
- 3
- 4

2-3 Servings Meat, Poultry, Fish, Beans, Nuts

- 1
- 2
- 3

2 – 3 Servings Milk, Yogurt, Cheese

- 1
- 2
- 3

Fats, Oils, Sweets – Use Sparingly

- 1
- 2

Liquids consumed

1. H₂O
- 2.
- 3.

DAILY EXERCISE CHART

Cardiovascular – Aerobic Exercise

Servings:

- Bread = 1 slice
Cereal = 1 ounce ready to eat cereal
 ½ cup cooked cereal
Rice, Pasta = ½ cup cooked rice or pasta
 5-6 small crackers
Vegetables = 1 cup raw leafy vegetables
 ½ cup chopped raw vegetables
 ½ cup cooked chopped vegetables
 ½ cup vegetable juice
Fruits = 1 medium piece fresh fruit
 ½ cup cooked or canned fruit
 ½ cup fruit juice
Milk = 1 cup milk
 1 cup yogurt
 ½ ounce natural cheese
 2 ounces processed cheese
Meat = 2-3 ounces cooked lean meat
Fish = 2-3 ounces cooked fish
Poultry = 2-3 ounces cooked lean poultry
Dry Beans = ½ cup cooked dry beans
Eggs = 1 egg
Nuts, seeds = 2 tablespoons peanut butter
 1/3 cup nuts/seeds
Fats = No specific amount (limit intake)
Oils = No specific amount (limit intake)
Sweets = No specific amount (limit intake)

7TH/8TH GRADE “I CAN” STATEMENTS: WEIGHT LIFTING

“I Can” answer the following questions about weight lifting

- What muscles certain machines work
- The basic muscles of the front of the body
- The basic muscles of the back of the body

“I Can” define

- Triceps
- Biceps
- Abdominals
- Quadriceps
- Gluteus Maximus
- Tricep Extension
- Bicep Extension
- Chest Press
- Leg Extension

“I Can” use safety procedures while working out in the fitness center.

“I Can” use strategies I have learned in class to successfully use each machine in the fitness center

“I Can” demonstrate the correct way to do the following skills:

- Bicep extension
- Tricep extension
- Shoulder press
- Leg press
- Leg extension
- Pectoral Fly

8TH GRADE “I CAN” STATEMENTS: SPEEDBALL

Through the study guide provided for me for the speedball unit:

“I Can” answer the following questions about speedball:

- How to start a game of speedball
- What each type of conversion is
- The different ways to score points

“I Can” define

- Pass
- Foul
- Violation
- Conversion
- Touchdown
- Goal
- Basket

“I Can” identify the goal keeper and the center.

“I Can” use strategies I have learned in class to successfully play each position during tournament play at the end of the speedball tournament.

“I Can” demonstrate the correct way to do the following skills:

- Pass while kicking
- Pass while throwing
- Conversion with the feet
- Conversion with the hands
- Wall conversion

“I Can” participate in a 7 on 7 type speedball with good sportsmanship.

8TH GRADE “I CAN” STATEMENTS: BASKETBALL

Through the study guide provided for me for the basketball unit:

“I Can” answer the following questions about basketball:

- Who invented the game of basketball
- How the game of basketball begins
- The method used to take the ball away from the other team

“I Can” define

- Lay-up
- Charge
- Zone defense
- Man-to-man defense
- Bounce pass
- Chest pass
- Overhead pass

“I Can” identify the small forward, the point guard, and the center.

“I Can” use strategies I have learned in class to successfully play man-to-man and zone defense during tournament play at the end of the basketball unit.

“I Can” demonstrate the correct way to do the following skills:

- Foul shot
- Overhead pass
- Jump shot
- Dribbling while jogging
- Lay-up

“I Can” be able to participate in a 5 on 5 type basketball game with good sportsmanship.

8TH GRADE “I CAN” STATEMENTS: FLAG FOOTBALL

Through the study guide provided for me for the flag football unit:

“I Can” answer the following questions about flag football:

- When the basic roots of the game were played
- How the game of flag football begins
- How many chances the offense has to move the football to the next 1st down marker

“I Can” define

- Blocking
- Dead ball
- Field goal
- Down
- Handoff
- Interception
- End zone

“I Can” identify the center, quarter back, and linemen

“I Can” use strategies I have learned in class to successfully score a touchdown with my teammates during tournament play at the end of the flag football unit.

“I Can” demonstrate the correct way to do the following skills:

- Forward pass
- Touch back
- Catch the football
- Handoff
- Snap

“I Can” be able to participate in a 7 on 7 type flag football game with good sportsmanship.

8TH GRADE “I CAN” STATEMENTS: FLOOR HOCKEY

Through the study guide provided for me for the floor hockey unit:

“I Can” answer the following questions about floor hockey:

- When the game of floor hockey was invented
- Where the first game of floor hockey was played
- The most accurate shot in floor hockey

“I Can” define

- Stick handling
- Roughing fouls
- Minor penalties
- Slap shot
- Wrist shot
- Freezing the puck
- Hat trick

“I Can” identify the defenders, the wings, and the center.

“I Can” use strategies I have learned in class to successfully play each position during tournament play at the end of the floor hockey unit.

“I Can” demonstrate the correct way to do the following skills:

- Wrist shot
- Stick handling
- Save
- Face-off
- Passing while moving

“I Can” be able to participate in a 6 on 6 type floor hockey game with good sportsmanship.

8TH GRADE “I CAN” STATEMENTS: FRISBEE

Through the study guide provided for me for the Frisbee unit:

“I Can” answer the following questions about Frisbee:

- How to properly grip the disc
- How to properly follow through with a pass
- Who gets possession of the disc after a turnover occurs

“I Can” define

- Turnover
- Stall count
- Foul
- Pancake catch
- Traveling
- Change of possession

“I Can” identify the difference between the pancake, 2-handed rim, and 1- handed rim catch.

“I Can” use strategies I have learned in class to successfully play a self-refereed Ultimate Frisbee game at the end of the Frisbee unit.

“I Can” demonstrate the correct way to do the following skills:

- Pancake catch
- 2-handed rim catch
- 1-handed rim catch
- Passing

“I Can” be able to participate in a 7 on 7 type Ultimate Frisbee game with good sportsmanship.

7TH/8TH GRADE “I CAN” STATEMENTS: FITNESS

Through the study guide provided for me for the fitness unit:

“I Can” answer the following questions about fitness:

- The method used to properly take a heart rate
- The different places heart rate can be taken at
- The 5 components of physical fitness

“I Can” define

- Target heart rate
- Resting heart rate
- Maximum heart rate
- Muscular strength
- Muscular endurance
- Body composition
- Cardiovascular fitness
- Flexibility

“I Can” identify the difference between the five components of fitness.

“I Can” use strategies I have learned in class to successfully raise my heart rate during a cardiovascular workout.

“I Can” demonstrate the correct way to do the following skills:

- Push-ups
- Sit-ups
- Lateral bounds
- Arm and leg stretches
- The proper way to use the weight lifting machines

“I Can” be able to participate in a weight lifting work out using the proper safety methods learned throughout the fitness unit.

8TH GRADE “I CAN” STATEMENTS: LACROSSE

Through the study guide provided for me for the Lacrosse unit:

“I Can” answer the following questions about lacrosse:

- Who invented the game of lacrosse
- How the game of lacrosse begins
- The method used to throw the lacrosse ball

“I Can” define

- Attackers
- Mid-fielders
- Defender
- Goalie
- Face-off
- Off-sides
- Turnover

“I Can” identify the defensive area, wing area, and attack area on a diagram of the lacrosse field.

“I Can” use strategies I have learned in class to successfully score a goal with my teammates during tournament play at the end of the lacrosse unit.

“I Can” demonstrate the correct way to do the following skills:

- Cradling
- Passing
- Catching
- Shooting

“I Can” be able to participate in a 7 on 7 type lacrosse game with good sportsmanship.

8TH GRADE “I CAN” STATEMENTS: SOFTBALL

Through the study guide provided for me for the softball unit:

“I Can” answer the following questions about softball:

- What the difference between a force and a tag out is
- What an inning consists of
- The methods used to get a batter or base runner out.

“I Can” define

- Force
- Infield Fly Rule
- Tag-up
- Inning
- Line Drive
- Steal

“I Can” identify the short center, pitcher, and short stop

“I Can” use strategies I have learned in class to successfully get runners out during tournament play at the end of the softball unit.

“I Can” demonstrate the correct way to do the following skills:

- Tag-up
- Catch
- Field a ground ball
- Throw

“I Can” be able to participate in a softball game with good sportsmanship.

8TH GRADE “I CAN” STATEMENTS: SOCCER

Through the study guide provided for me for the soccer unit:

“I Can” answer the following questions about soccer:

- The difference between onsides and offsides
- How the game of soccer begins
- The methods used to take the ball away from the other team

“I Can” define

- Offsides
- Pass
- Trap
- Dribble
- Goal-kick
- Corner Kick

“I Can” identify the forwards, the defense, and the midfield players.

“I Can” use strategies I have learned in class to successfully play man-to-man and zone defense during tournament play at the end of the soccer unit.

“I Can” demonstrate the correct way to do the following skills:

- Throw-in
- Shooting
- Pass
- Dribble
- Corner-kick

“I Can” be able to participate in a 5 on 5 type soccer game with good sportsmanship.

8TH GRADE “I CAN” STATEMENTS: TRACK AND FIELD

Through the study guide provided for me for the Track & Field unit:

“I Can” answer the following questions about Track & field:

- The different events
- The difference between a 100M, 200M, 400M, and 800 meter run
- The method used to successfully pass a baton to a teammate.

“I Can” define

- Long Jump
- High Jump
- 400M race
- Shot Put
- Discus

“I Can” identify the materials needed for each type of event.

“I Can” use strategies I have learned in class to successfully play finish a race.

“I Can” demonstrate the correct way to do the following skills:

- Shot put
- Long jump
- High Jump
- Discus

“I Can” participate in mock track and field meet with good sportsmanship.

GLOSSARY

1. **Abdominals** -The group of muscles forming the anterior supporting wall of the pelvic and stomach regions.
2. **Aerobic** - Refers to those activities that require oxygen for prolonged periods and place enough of a demand (overload) on the body that beneficial changes occur in the lungs, heart and vascular system. (Aerobic exercise involves covering slow distance rather than short bursts of speed).
3. **Anaerobic** -Refers to exercises which do not utilize the oxygen a person presently is breathing. An anaerobic activity is a 100 yard dash. (Anaerobic exercise is characterized by bursts of speed or effort).
4. **Biceps** -The large flexor muscle of the upper arm.
5. **Blood Pressure** -The force exerted by the blood against artery walls; the pressure of the blood in the arteries.
6. **Body Composition** - The make-up of the body in lean body mass and fat mass. It is usually referred to as a percentage of fat and lean body mass.
7. **Calorie** -A calorie is the measure of heat-producing value of food when used by the body.
8. **Carbohydrates** - A major source of energy during exercise primarily found in sugars and starches. Simple sugars include sugar, honey, candy and fruits. Complex carbohydrates include enriched and fortified breads and cereals, pasta, rice and vegetables.
9. **Cardiovascular Disease** - Diseases of the heart and blood vessels. Presently the number one killer in the United States. (Fact: Almost one of two Americans die of cardiovascular disease).
10. **Cardiovascular Endurance** - The ability of the heart, blood vessels, blood and lungs to deliver oxygen to the body.
11. **Cholesterol** -A waxy fatty-like material used by the body in a variety of chemical processes. It is also associated with hardening of the arteries and serious heart disease.
12. **Circuit Training** -A set and numbered sequence of exercises performed for specific periods of time.
13. **Cool-down**- A short period of mild exercise after a session of vigorous activity. It usually consists of walking, slow jogging and stretching.
14. **Deltoid** -A large muscle covering the shoulder joint and serving to raise the arm laterally.
15. **Extension** - This is a term used to indicate the straightening movement of muscles at a joint.
16. **Fats** - The major source of essential fatty acids. A carrier for fat soluble vitamins and a source of energy during endurance exercise. (Including milk, butter, margarine, eggs, liver and kidney, leafy green and yellow vegetables).

Fats* should provide 20 - 30% of daily caloric intake (9 calories per gram)

Sources include:

Unsaturated: Safflower oil, corn oil, margarine's; Saturated: Solid shortenings, butter, meat, milk *Most Americans eat too much fat! Fat calories are unhealthy and fattening. Foods high in fat calories include: French fries, potato chips, mayonnaise, chocolate, hamburgers, fried chicken, bacon, sausage and butter.

17. **Fiber** - The non-digestible part of some plant foods. Fiber serves as an intestinal "house-cleaner." High fiber diets have been linked to less colon cancer and lowering cholesterol. Fruits, vegetables, grains and cereals are good sources of fiber.
18. **Flexibility** - The movement of a body part through its full range of motion.

19. **Gastrocnemius** - The medical name for the calf muscles of the largest muscle of the lower leg.
20. **Gluteus Maximus** -The medical term for the buttocks muscle.
21. **Hamstrings** - The muscle group of the posterior (back) of the upper leg.
22. **Health-Related Fitness** - One aspect of physical fitness more important to physical well-being and includes cardiovascular endurance, strength, muscular endurance, and flexibility and body composition.
23. **Latissimus Dorsi** -The medical term for the largest muscle of the back. (LATS)
24. **Lifestyle** - This is the way a person chooses to live. A lifestyle study was performed by Dr. Lester Breslow at U.C.L.A. in 1965, in which he studied a very large group of happy, healthy, productive and long lived individuals. They all followed his seven steps to a healthy lifestyle. (See Junior-Senior Wellness Concepts Section)
25. **Ligament** - A strong band of connecting tissue that holds bone to bone.
26. **Maximum Heart Rate** - The highest heart rate capable b the human body. It is figured by subtracting age from 220.
27. **Muscular Endurance** - The ability of a muscle to a group of muscles to work for a period of time.
28. **Muscular Strength** -Muscular strength is the amount of force a muscle can exert one time.
29. **Obesity** - an increase in body weight beyond physical and skeletal requirements due to an accumulation of excess fat. It's usually applied to a condition of 20 percent or more over ideal body weight. Obesity puts a strain on the heart and can increase the chance of developing high blood pressure and diabetes.
30. **Pacer** - A fitness test which measures cardiovascular endurance capacity by increasing the individual's pace as by increasing the passes.
31. **Pectorals** -The muscles which connect the upper arms and shoulders to the chest.
32. **Physical Education** - That phase of education designed to teach the concepts and benefits of a healthy lifestyle through active participation in psychomotor and physical fitness activities.
33. **Physical Fitness** -The ability to carry on everyday activities without undue stress or fatigue, while remaining able to respond to the increased demands of an emergency. It also includes the ability to pursue recreational activities without pain, stress or exhaustion.
34. **Progression Principle** - Refers to the gradual increase of exercise or activity over a period of time. As the body is forced to work harder, it will adapt to the stress and improve.
35. **Proteins** -Should provide 12 - 15% of daily caloric intake, (4 calories per gram)
36. **Quadriceps** -The great extensor muscle of the front (anterior) of the thigh.
37. **Range of Motion** - The degree of flexibility of a body joint. (Full range is if motion is when a body joint is movable to its full limit without undue stress.
38. **Repetition** -The number of repeated movements or exercises performed.
39. **Resting Pulse Rate** - This is a measure of pulse rate after complete rest. A true resting pulse is as soon as you wake up.
40. **Set** -A predetermined number of repetitions.
41. **Skill Related Fitness** - Those aspects of fitness which help a person perform motor tasks, such as sports and recreational activities. Included are coordination, agility, speed, balance, reaction time and power.
42. **Static Flexibility** - The ability to move joints and muscles slowly through a wide range of motion. Static flexibility should be emphasized by holding the stretch for 10-60 seconds.

43. **Steroids** -Steroids are hormones that assist in developing muscle mass. The use of steroids can cause cancer of the liver, increased blood pressure, decreased testicular size and decreased sperm production.
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55. **Static Flexibility** - The ability to move joints and muscles slowly through a wide range of motion. Static flexibility should be emphasized by holding the stretch for 10-60 seconds.
56. **Steroids** -Steroids are hormones that assist in developing muscle mass. The use of steroids can cause cancer of the liver, increased blood pressure, decreased testicular size and decreased sperm production.
57. **Target Heart Pulse Rate** - the range of heart rate during exercise that creates a "training effect" on certain beneficial cardiovascular changes in the body. The minimum rate at which your heart should be beating to get the optimum aerobic conditioning effect.
58. **Trapezius** -A large diamond shaped muscle of the upper back and base of the neck (posterior side).
59. **Triceps** - The three headed extensor muscle of the upper arm. The antagonistic muscle to the biceps muscle.
60. **Warm-Up** -Warm-up is the preparation of the body before exercise which gradually increases heart rate and body temperature and reduces the chances of muscle soreness and injury.
61. **Weight Lifting** -A competitive sport in which participants try to lift more weight than their opponents.
62. **Weight Training** -Weight Training is an exercise program which includes isotonic exercises using barbells, dumbbells, exercise or weight machines.
63. **Wellness** -A state of healthy balance whereby an individual makes sound decisions regarding lifestyle based upon empirical research