

VSC – PHYSICAL EDUCATION

Technical Vocabulary/Glossary

Absorption	Interception of force or energy.
Acceleration	The rate at which velocity changes with respect to time.
Adherence	The ability to continue something, such as a personal fitness program, over a period of time.
Aerobic	The form of energy production in the body that requires the presence of oxygen; it is used for activities such as walking or jogging.
Aerobic Capacity	Another term for maximal oxygen consumption which provides an indication of aerobic fitness.
Aerobic Fitness	The capacity to take in, transport and utilize oxygen while performing a fitness task. Also see cardio-respiratory endurance.
Affective	Traits and feelings associated with social, personal and emotional development.
Agility	The ability to change direction quickly and control movement of the whole body.
Anabolic Steroids	Synthetic modifications of male hormone testosterone used to increase muscle mass and strength. These drugs were developed to maximize the anabolic effects and minimize the androgenic effects of testosterone. Anabolic steroids are not legal substances, unless prescribed by a doctor for medical reasons.
Anaerobic	A technical word which literally means without air, where "air" is generally used to mean oxygen, as opposed to aerobic. The oxygen-deprived form of energy production.
Anaerobic Exercise	The cells of the body are not using oxygen during exercise. This form of exercise is found in activities such as weight-lifting or sprinting.
Anorexia Nervosa	An eating disorder in which a person severely restricts food intake in an attempt to be extremely low in body fat and body weight.

Autonomic Reflex	A reflex which is unlearned, unpremeditated, involuntary and in which the pathways are built into the neural anatomy of each individual during development.
Balance	The ability to control or stabilize your equilibrium while moving or staying still.
Ballistic Stretching	Exercises that involve quick bouncing movements. Ballistic stretching movements usually do not involve holding the stretch for any period of time.
Barrier	Something that obstructs or separates, often by emphasizing differences.
Basal Metabolic Rate	The rate at which calories are used to sustain life functions during rest.
Biomechanics	The study of the principles of physics applied to human motion. The internal and external forces acting on a human body and the effects of these forces.
Blood Pressure	The force by which blood is pushed against the walls of the arteries.
Body Alignment	Body control using such skills as balance, coordination, spatial judgments postural efficiency.
Body Composition	The proportion of body fat to lean tissue in an individual, usually given as a percentage of body weight that is fat; or the ratio of fat (adipose) tissue to total body mass, expressed as a percent.
Body Mass Index (BMI)	A ratio of height to weight that correlates with body fat in the general population. The health risk from weight greatly increases with a BMI of 30 and over.
Bulimia	An eating disorder in which a person binge eats and then purges.
Buoyancy	The upward force that fluids exert on all matter creating the ability or tendency to float.
Caffeine	The stimulant ingredient present in coffee, tea, cola and chocolate.
Calorie	The unit for measuring the energy produced by food when oxidized in the body.
Caloric Expenditure	The number of calories expended or burned in daily physical activity.
Caloric Intake	The number of calories expended or burned in daily physical activity.

Carbohydrate	A biochemical compound composed of one or more simple sugars bonded together that are used as a source of energy for the body.
Carbohydrate Loading	Ingestion of foods high in carbohydrates (preferably complex) prior to endurance sports or intensive training to improve performance.
Cardiorespiratory	Relating to both the heart and the respiratory system.
Cardiorespiratory Endurance	The body's ability to take in and use oxygen so that muscles can function; its level is dependent on cardio-respiratory capacity and the ability of the cells in the body to efficiently use oxygen and release carbon dioxide. Also known as aerobic fitness.
Cardiovascular	Of, relating to or involving the heart and blood vessels. The cardiovascular system includes arteries, veins, arterioles, venules, and capillaries.
Center of Gravity	Focus of gravitational forces: the point through which the sum of gravitational forces on a body can be considered to act.
Centrifugal Force	The force that makes rotating bodies move away from the center of rotation.
Centripetal Force	The force that makes rotating bodies move toward the center of rotation.
Circulatory System	The heart and the system of blood vessels in the body, including arteries, capillaries, and veins.
Closed Skills	Motor skills that are performed in an environment that is largely stable and predictable (e.g. archery, foul shooting in basketball, gymnastics)
Cognitive Skills	The use of skills and understandings that relate to decision making and intellectual learning.
Conditioning	Engaging in regular physical activity or exercise that results in an improved state of physical fitness.
Coordination	The ability to use your eyes and ears to determine and direct the smooth fluid movement of your body.
Cultural	Relating to a particular society or civilization.
Dehydration	Excess fluid loss from the body; symptoms include weakness and fatigue.

Dynamic Balance	State of the body moving with constant speed and direction with zero acceleration.
Eating Disorders	Health problems that manifest themselves through starvation, eating binges followed by purging or overeating. (See anorexia and bulimia)
Ectomorph	A person that is characterized by long and thin muscles/limbs and low fat storage; usually referred to as slim.
Educational Gymnastics	A natural progression of the exploration of fundamental movement skills. Five skills – rolling, transferring weight, balancing, climbing, and hanging and swinging – are developmentally appropriate for preschool and primary-grade children and can introduce them to the experiences characteristic of gymnastics.
Efficacy	The power to produce an effort.
Efficient Movement	The skillful performance of tasks, which permits, desired results to be obtained with the least strain and a minimal expenditure of energy.
Effort	This concept defines how the body moves. It consists of three components: <i>time</i> (faster or slower), <i>force</i> (harder or softer), and <i>flow</i> (bound or free).
Empathy	Understanding of another's feelings: the ability to identify with and understand another person's feelings or difficulties.
Endomorph	A stocky person: somebody whose body has a stocky build and a prominent abdomen.
Endorphin	Any of several chemicals produced by the brain that help relieve pain.
Energy Balance	The balance between calorie consumed in the diet and the amount of calories burned in daily physical activity.
Energy Cost	The amount of calories required for you to perform different physical activities or exercises.
Energy Expenditure	The number of calories you burn each minute.
Ergogenic	The ability to improve work or performance.
Exercise	Physical activity that is planned, structured, repetitive, and results in the improvement or maintenance of personal fitness.
Exercise Physiology	The aspect of kinesiology and sports medicine that involves the study

of how the body adjusts and adapts to exercise.

External Forces

Forces outside of the system that change or alter movement. Examples are air resistance, gravity, and contact with the ground or some other body.

Fitness

Capability of the body of distributing inhaled oxygen to muscle tissue during increased physical effort.

Fitness Components

See health related and skill related fitness.

Fitness Plan

A plan developed after a self-assessment of the health related components of fitness. The plan should include the principles of overload, progression, specificity, regularity and individuality along with the FITT guidelines.

FITT

FITT is an acronym for Frequency, Intensity, Time and Type, which are four key ways that activity can be manipulated to create a desired outcome.

Flexibility

The elasticity of muscles and connective tissues, which determines the range of motion of the joints.

Force

That which alters or tends to alter a body's state of rest or uniform motion in a straight line. The pushing or pulling effect that one body produces on another body.

Frequency

In a personal fitness plan, how often you exercise.

Friction

The force that resists relative motion between two objects in contact with one another.

Functional Health

A person's physical ability to function independently in life, without assistance.

Goal

Aim: something that somebody wants to achieve. A predetermined plan of action

Gravity

The pull on all bodies in the earth's sphere toward the earth's center.

Health

A state of well being that includes physical, mental, emotional, spiritual, and social aspects.

Health-Related Fitness

Physical fitness primarily associated with disease prevention and functional health. Five factors contribute to health related fitness: cardiorespiratory fitness, body composition, flexibility, muscular strength, and muscular endurance.

Heart Rate	Heartbeats during specified time: the number of heartbeats occurring within a specified length of time
High-Density Lipoprotein	(HDL) A type of lipoprotein that carries cholesterol from the bloodstream to the liver, where it can be excreted from the body. HDL may protect individuals against coronary disease.
Hypokinetic	Physically inactive or sedentary.
Individuality	The training principle that takes into account that each person begins at a different level of fitness, each person has personal goals and objectives for physical activity and fitness, and each person has different genetic potential for change.
Inertia	The tendency of all objects to resist any change in motion.
Intensity	In a personal fitness prescription, how hard you work.
Internal Forces	A system of bodies that exert forces on one another altering movement. Example: a muscle contracts and exerts pulling forces on the bones to which it is attached.
Innate Abilities	Abilities existing in, belonging to, and present in an individual to perform a task.
Kinesthetic	The sense perception of movement; the muscular sense.
Kinetic	The ability of the body to do work by virtue of its motion.
Lactic Acid	A byproduct of anaerobic respiration that can cause discomfort by increasing the acidity in the body.
Learning Stages	Three Stages: <i>Cognitive Stage</i> - The first stage of motor learning when the participant requires intense concentration with no distraction. <i>Associative Stage</i> - The second or intermediate stage. Skill is used in combination with other skills when the learner is improving the quality of performance. <i>Automatic Stage</i> - The final stage. Advanced, proficient and dynamic, skill is used in combination with other skills in an open environment. Stage varies with skill being practiced.
Lifetime Physical Activities	Typically non-team activities that can be used throughout life for the purpose of improving or maintaining physical fitness.

LDL	(Low-Density Lipoprotein) a type of lipoprotein that carries cholesterol from the digestive tract to other body tissues: implicated in the accumulation of plaque within arteries. Removed from arteries by HDL.
Linear Velocity	Speed traveled in a straight line.
Locomotion	Movement or the power to move from one place to another.
Locomotor Skills	Moving the total body to get from one place to another using a walk, run, hop jump, leap, skip, gallop or slide or some combination of these.
Manipulative Skills	A skillful movement done to or with objects such as throwing a bean bag, striking a soccer ball, catching a frisbee or juggling.
Mass	The quantity of matter that something is made of.
Mastery	Display of great skill or knowledge.
Maximum Heart Rate	The highest number of times the heart can beat per minute. Generally calculated by subtracting a person's age from 220.
Mesomorph	A muscular person: a husky muscular body, or somebody who has such a body.
Metabolic Rate	The number of calories that is burned or expended as heat. The rate at which the body burns energy, translated into caloric expenditure.
Momentum	The quantity of motion that a body possesses based on its mass and velocity.
Motor Activities	Activities that involve motion representing reasonably complex movement patterns that have been learned.
Motor Tasks	<i>Continuous</i> -Skills that are repeated one after another such as a basketball dribble, and do not have a clearly defined beginning and end. <i>Discrete</i> -Skills that are unconnected to other skills such as the volleyball pass, and have a clear beginning and end.
Movement Concepts	Concepts and ideas that explain efficient movement patterns and how a skill is to be performed.
Movement Strategies	A careful plan or method explaining how, when, and why we move in order to achieve movement skills or goals.

Muscular Endurance	The ability to contract your muscles repeatedly without excessive fatigue.
Muscular Strength	The maximal force that you can exert when you contract your muscles.
Newton's Laws of Motion	<p><i>First Law of Motion (Law of Inertia)</i>-an object at rest and an object in motion remains in motion at a constant speed and in a straight line unless acted on by an unbalanced force.</p> <p><i>Second Law of Motion (Law of Motion)</i>-the acceleration of an object depends on the mass of the object and the amount of force applied.</p> <p><i>Third Law of Motion (Law of Action and Reaction)</i>-whenever one object exerts a force on a second object, the second object exerts an equal and opposite force on the first.</p>
Non-locomotor	Movement in the space that the body or its parts can reach without traveling away from a starting location.
Non-manipulative Skills	Skillful movements done with the body like turning, twisting, or rolling.
Nutrient	A substance in foods that the body needs for proper growth, development, and functioning. There are six nutrients: carbohydrates, lipids, proteins, vitamins, minerals and water.
Nutrition	The science concerned with the relation of organic nutrients, which come from food, to the physical well being of the organism.
Obesity	A condition in which the body which the body has excessive adipose (fat) tissue.
Open Skills	Motor skills that are performed in a changing environment. (e.g. soccer pass, field goal in basketball, tennis forehand)
Overload	The principle that states to improve your level of physical fitness, you must increase the amount of activity or exercise that you normally do.
Overloading	Increasing the work done by muscles to above normal levels, but below the loads that would cause injury or distress, to improve fitness.

Oxygen Debt	When the oxygen demands of the muscles cannot be met during physical activity. A result of anaerobic activity.
Perceived Exertion Scale	A method of self-assessment of the intensity of a person's workload based on a scale of 6-20. (Also known as the Borg Scale)
Persistence	The act of a person who continues steadily with something despite problems or obstacles.
Personal Fitness	The result of a way of life that includes living and active lifestyle, maintaining good or better levels of physical fitness, consuming a healthy diet, and practicing good health behaviors throughout life.
Physical Fitness	A level of individual physical ability that allows a person to perform daily physical tasks effectively with enough energy reserves for recreational activities or unexpected physical challenges.
Physically Active Lifestyle	A way of living that regularly includes physical activity such as walking, climbing stairs, or participating in recreational movements.
Physiology	Study of the function of body systems such as the respiratory system and organs such as the heart and muscles.
Power	The ability to move your body parts swiftly while at the same time applying the maximum force on your muscles.
Practice Plan	A plan developed to improve locomotor, nonlocomotor and fundamental movement skills. Plan should include progressions for skill development which move through the three stages of learning which include the cognitive, associative and automatic stages.
Progression	A rate at which you change the frequency, intensity, and time of your personal fitness plan.
Proprioception	A sense of perception at a sub-conscious level of the movements and positions of the body, independent of vision.
Psychomotor	Physical activity relating to fitness and skill.
Radius of Rotation	Linear distance from an axis to a point on a rotating body.
Range of Motion (ROM)	Varying degrees of motion around a joint.
Reaction Time	The ability to react or respond quickly to what you hear, see or feel.
Recovery time	Time or rest between exercises.

Regularity	Principle that states physical activity must be performed on a regular basis to be effective and that long periods of inactivity can lead to loss of the benefits achieved during the training period.
Re-hydrate	The process of replacing fluids that have been lost or excreted from the body.
Repetition	The completed execution of an exercise one time.
Resistance	Opposition of some force to another.
Respiratory (System)	Relating to breathing (system in the body that takes in and distributes oxygen).
Rubric	A scoring tool that lists the criteria for a piece of work or what counts.
Scoring Rubric	Scoring rubrics are descriptive scoring schemes developed by educators to guide the analysis of student work (i.e. the products or processes of their efforts)
Self-efficacy	Belief in ability to shape self: the belief that you can influence your own thoughts and behavior.
Skill-related Fitness	The ability to perform successfully during games and sports; also called performance fitness. Skill related fitness has six components: agility, balance, coordination, power, speed, and reaction time.
Skill Themes	A way of teaching children how to participate effectively in various activities by focusing on the development of the necessary skills. Skill themes include locomotor skills, non-manipulative skills, and manipulative skills.
Skinfold Measurement	A simple method of measuring body composition, which uses calipers to measure the thickness of folds of skin.
Social Psychology	Focuses on the student and how they feel about themselves, how they can improve their sense of self, and how they can develop their full potential. Also refers to how students relate and interact with each other.
Somatotype	Dr. William Sheldon in the 1940's developed a theory that there are three basic body types, or <i>somatotypes</i> . The three body types are ectomorph, endomorph, and mesomorph.
Specificity	The training principle that states, improvement in personal fitness will occur in the particular muscles that are overloaded during

physical activity or exercise. Also addressed by working on a certain component of fitness, such as flexibility exercises directly improve flexibility.

Speed	The ability to move your body or parts of your body swiftly.
Static Balance	State of equilibrium, without movement. Stationary.
Tactical Game Model	Physical activities that are arranged into four basic categories; net/wall, invasion, striking/fielding and target.
Target Heart Rate	A figure used to determine the number of heartbeats per minutes required to positively affect the cardiorespiratory system during exercise.
Target Zone	The range of above-normal activity that optimizes an increase in fitness usually between 60-80 percent of maximum heart rate.
Time	In a personal fitness plan, the length of time you work.
Torque	A turning, or rotary force.
Training Threshold	The minimal amount of exercise that is required to improve fitness.
Velocity	The rate of motion in a particular direction in relation to time. Quickness of motion.
Vestibular	The part of the inner ear concerned with balance and body orientation.
Vigorous Activity	Activity full of physical or mental strength or active force carried out forcefully and energetically.
Warm-up	A variety of low intensity activities designed to prepare your body for more vigorous activities.
Wellness	The attainment and maintenance of a moderate to high level of physical, mental, emotional, spiritual, and social health.