

GCSE PE – Crucial Knowledge Glossary

	Keyword	Definition
1	Abduction	Movement where limbs are moved away from the midline of the body
2	Ability	Inherited, stable traits that determine an individual's potential to learn or acquire a skill.
3	Adaptability	The potential to change with ease.
4	Adapted sports	Competitive sports for individuals with disabilities
5	Adduction	Movement where limbs are moved towards the midline of the body
6	Adrenaline	Natural hormone released to speed heart rate up.
7	Aerobic	With oxygen. When exercise is not too fast and is steady, the heart can supply all the oxygen that the working muscles need. Summarised as: glucose + oxygen → energy + carbon dioxide + water
8	Aerobic training zone	The aerobic training zone allows the aerobic system to be trained. To define aerobic training: 1. Calculate maximum heart rate (220 bpm) minus age: 220-age 2. Work at 60-80% of maximum heart rate.
9	Aggression	A deliberate intent to harm or injure another person, which can be physical or mental.
10	Agility	The ability to move and change direction quickly at speed, while maintaining control
11	Agonist (prime mover)	Muscle or group responsible for the movement.
12	Altitude	A geographical area (of land) which is over 2,000 m above sea level.
13	Altitude training	Training at altitude where there is less oxygen. The body adapts by making more red blood cells to carry oxygen. The additional oxygen carrying red blood cells is an advantage for endurance athletes returning to sea level to compete.
14	Altitude sickness	Nausea caused by training at altitude.
15	Alveoli	Air sacs in the lungs.
16	Amateur	This term defines someone who takes part in an activity as a hobby rather than for financial gain, has another main job outside of sport takes part for fun could be at a lower level.
17	Anabolic steroids	Artificially produced male hormones mimicking testosterone. They promote muscle and bone growth, and reduce recovery time. Often used by power athletes, eg sprinters.
18	Anaerobic	Without oxygen. When exercise duration is short and at high intensity, the heart and lungs cannot supply blood and oxygen to muscles as fast as the respiring cells need them. Summarised as: glucose → energy + lactic acid.
19	Arousal	A physical and mental (physiological and psychological) state of alertness/readiness, varying from deep sleep to intense excitement/alertness.
20	Arteries	Blood vessels carrying blood away from the heart
21	Articulating bones	Where two or more bones meet to allow movement at a joint.
22	Atria	Upper chambers of the heart that collect blood from the veins
23	Axis	Imaginary line through the body around which it rotates. Types of axis: longitudinal (or vertical) – head to toe / transverse – through the hips / sagittal – through the belly button.

24	Backflow	The flowing backwards of blood. Valves in the veins prevent this from happening.
25	Balance	The maintenance of the centre of mass over the base of support. Reference can be made to whilst static (still) or dynamic (whilst moving).
26	Balanced Diet	It is defined as eating: the right amount (for energy expended), the right amount of calories, according to how much you exercise and different food types to provide suitable nutrients, vitamins and minerals.
27	Ball and Socket Joint	Joint that allows many movements
28	Beta Blockers	Drugs that are used to steady nerves by controlling heart rate. They have a calming and relaxing effect.
29	Blood Doping	Defined as the misuse of techniques and/or substances to increase one's red blood cell count.
30	Blood Pressure	The pressure that blood is under. Types of pressure: systolic - when the heart is contracting / diastolic - when the heart is relaxed.
31	Body Composition	The percentage of body weight which is fat and non-fat (muscle and bone).
32	Bradycardia	Lowered resting heart rate due to long-term exercise.
33	Bronchi	Tube that carry air from the trachea to the lungs.
34	Calorie	A unit which measures heat or energy production in the body, normally expressed as Kcal.
35	Capillaries	Very thin blood vessels that allow gaseous exchange to happen.
36	Carbohydrates	The body's preferred energy source.
37	Cardiac cycle	Sequence of events that occur when the heart beats
38	Cardiac output	The amount of blood ejected from the heart in one minute or stroke volume x heart rate.
39	Cardiovascular endurance	The ability of the heart and lungs to supply oxygen to the working muscles.
40	Circuit training	A series of exercise stations whereby periods of work are interspersed with periods of rest.
41	Closed Season	Post (transition). It is defined as: period of rest to recuperate / players doing gentle aerobic exercise to maintain general fitness / fully rested and ready for pre-season training
42	Closed Skill	A skill which is not affected by the environment or performers within it. The skill tends to be done the same way each time.
43	Commercialisation	To manage or exploit (an organisation, activity, etc) in a way designed to make a profit. The specification refers to commercialised activity as being sponsorship and the media only.
44	Co-ordination	The ability to use different (two or more) parts of the body together, smoothly and efficiently.
45	Competition season (peak)	It is defined as: playing season, taking part in matches every week, maintenance of fitness related to the activity but not too much training as it may cause fatigue which would decrease performance and concentration on skills/set plays to improve team performance.
46	Continuous training	Involves working for a sustained period of time without rest. It improves cardio-vascular fitness. Sometimes referred to as a steady state training.
47	Contract to compete	Unwritten agreement to follow and abide by the written and unwritten rules.
48	Deep breathing	Slow, deep breaths whilst relaxed.
49	Dehydration	Excessive loss of body water interrupting the function of the body.
50	Deltoid	Muscle causing flexion and some extension at the shoulder.
51	Diastole	Term used to describe the relaxation phase of cardiac cycle.

52	Direct aggression	Aggressive act which involves physical contact with others, eg a punch.
53	Discrimination	The unjust or prejudicial treatment of different groups of people, especially on the grounds of race, age or sex.
54	Dislocation	Where the bones of a joint separate from their normal position.
55	Disposable income	Amount of income available to be spent or saved as one wishes.
56	Diuretics	Drugs that remove fluid from the body, elevating the rate of bodily urine excretion.
57	Delayed onset muscle soreness (DOMS)	The pain felt in the muscles the day after exercise.
58	Dorsiflexion	Movement at the ankle where the toes are pulled up towards the knee.
59	Ectomorph	A somatotype characterised by being tall and thin. Individuals with narrow shoulders and narrow hips.
60	Embolism	Blockage of a blood vessel.
61	Endomorph	A somatotype, characterised by a pear-shaped body/fatness. Individuals with wide hips and narrow shoulders.
62	Engagement patterns	How levels of participation vary across different social groups.
63	EPO (Erythropoietin)	Naturally occurring substance which will increase the number of blood cells in the body.
64	EPOC (Excess post-exercise Oxygen Consumption)	Sometimes referred to as oxygen debt (now an outdated term), EPOC refers to the amount of oxygen needed to recover after exercise. EPOC enables lactic acid to be converted to glucose, carbon dioxide and water (using oxygen). It explains why we continue to breathe deeply and quickly after exercise.
65	Erogenic aid	A technique or substance used for the purpose of enhancing performances.
66	Ethnic group	A community made up of people who share a common cultural background
67	Etiquette	A convention or unwritten rule in an activity. It is not an enforceable rule but it is usually observed.
68	Expire	Breathe out.
69	Expiratory reserve volume	The additional air that can be forcibly exhaled after the expiration of a normal tidal volume.
70	Externally paced - skill	The skill that is started because of an external factor. The speed, rate or pace of the skill is controlled by external factors, e.g. an opponent.
71	Extrinsic feedback	Received from outside of the performer, e.g. from a coach. See Kinaesthetic feedback for a comparison.
72	Extrinsic Motivation	The drive experienced by a performer when striving to achieve a reward.
73	Extrovert	Sociable, active, talkative, out-going personality type usually associated with team sports players.
74	Fartlek Training	Swedish for 'speed play'. Periods of fast work with intermittent periods of slower work. Often used in running, i.e. sprint, jog, walk, jog, sprint, etc.
75	Fat	A food source that provides energy at low intensities.
76	Fatigue	Either physical or mental, fatigue is a feeling of extreme or severe tiredness due to a build-up of lactic acid or working for long periods of time.
77	Feedback	Information a performer receives about their performance. Feedback can be given during and/or after performance.
78	Fine movement	Small and precise movement, showing high levels of accuracy and coordination. It involves the use of a small group of muscles.
79	First class Lever	Where the fulcrum lies between the effort and the resistance

80	Fitness	The ability to meet/cope with the demands of the environment.
81	FITT	FITT is used to increase the amount of work the body does, in order to achieve overload (see SPORT). FITT stands for: Frequency – how often you train // Intensity – how hard you train // Time – the length of the training // Type – the specific method, e.g. continuous training session
82	Flexibility	The range of movement possible at a joint.
83	Fulcrum	The part of the lever system that pivots, joints are the fulcrum in the body's lever system.
84	Gamesmanship	Attempting to gain an advantage by stretching the rules to their limit, e.g. time wasting.
85	Goal Setting (SMART)	A method to increase motivation and reduce anxiety. Goals should be SMART: Specific – specific to the demands of the sport/muscles used/movements used // Measurable – it must be possible to measure whether they have been met // Accepted – they must be accepted by the performer and others involved, eg coach // Realistic – they are actually possible to complete // Time bound – over a set period of time.
86	Goal Types (performance goals and outcome goals)	Performance goals are; Personal standards to be achieved and something that Performers compare themselves against what they have already done or suggest what they are going to do. There is no comparison with other performers. Outcome goals are goals that have a focus on the end result/winning.
87	Golden Triangle	The financial relationship between sport, sponsorship and trade.
88	Gross Movement	Using large muscle groups to perform big, strong, powerful movements.
89	Guidance	A method to convey information to a performer. Guidance methods: Visual (seeing) - Verbal (hearing) - manual (assist movement - physical) - mechanical (use of objects/aids)
90	Haemoglobin	The substance in the red blood cells which transports oxygen (as oxyhaemoglobin) and carbon dioxide.
91	Hawkeye	An optical ball tracking device used as an aid to officiating in tennis and cricket.
92	Health	A state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. Ill health refers to being in a state of poor physical, mental and/or social well-being.
93	Heart attack	It occurs when the flow of oxygen-rich blood to a section of heart muscle suddenly becomes blocked.
94	Heart chambers	They include the right and left atria and ventricles.
95	Heart rate	The number of times the heart beats (usually measured per minute).
96	High intensity interval training (HIIT)	It's an exercise strategy alternating periods of short intense anaerobic exercise with less intense recovery periods (see Interval training).
97	Hinge joints	Joints that allow flexion and extension
98	Hooliganism	Disorderly, aggressive and often violent behaviour by spectators at sporting events.
99	Home field advantage	Gaining an advantage in a sporting event from being in familiar surroundings, with the majority of the spectators supporting you.
100	Hydration	Having enough water to enable normal functioning of the body.
101	Hyperbaric chambers	High pressure chambers that force oxygen into an injury to speed up recovery
102	Hypertension	High blood pressure in the arteries.
103	Hypertrophy	The enlargement of an organ or tissue from the increase in the size of its cells.

104	Indirect aggression	Aggression which does not involve physical contact. The aggression is taken out on an object to gain advantage, e.g. hitting a tennis ball hard during a rally.
105	Information processing	Making decisions. Gathering data from the display (senses), prioritising the most important stimuli to make a suitable decision.
106	Inspiratory reserve volume	The additional air that can be forcibly inhaled after the inspiration of a normal tidal volume.
107	Inspire	Breathe in.
108	Integration	Involving the full participation of all people in community life but usually referring to disabled people
109	Interval training	Periods of training/work that are followed by periods of rest, e.g. work, rest, work, rest (see High intensity interval training).
110	Intrinsic feedback	Feedback from within the performer for example information from the senses or muscles.
111	Intrinsic motivation	The drive that comes from within the performer.
112	Introvert	A quiet, passive, reserved, shy personality type, usually associated with individual sports performance.
113	Isometric contraction	Muscle contraction where the length of the muscle does not alter. The contraction is constant, i.e. pushing against a load.
114	Isotonic contraction	Muscle contraction that results in limb movement: concentric contraction - shortening of the muscle // eccentric contraction is the lengthening of the muscle.
115	Kinaesthetic feedback	It's a type of intrinsic feedback, received via receptors in the muscles. Sensations that are felt by the performer, providing information from movement.
116	Knowledge of performance	Feedback about the quality of performance, for example technique.
117	Latissimus dorsi	Muscle causing extension at the shoulder
118	Level playing field	The same for all competitors.
119	Lever	A rigid bar (bone) that turns about an axis to create movement. The force to move the lever comes from the muscle(s). Each lever contains: a fulcrum - fixed point, effort (from the muscle(s) to move it) load/resistance (from gravity).
120	Ligament	Tissues that connect bone to bone.
121	Long bones	Bones of the legs and arms
122	Manual Guidance	Physically moving the performer
123	Masculinity	Displaying masculine (male) stereotypical behaviour.
124	Match analysis	Computer software that provides detailed statistical data about individual and/or team performances
125	Maximal heart rate	Calculated by: $220 - \text{age}$
126	Mechanical advantage	The efficiency of a working lever, calculated by: $\text{effort} \div \text{weight (resistance) arm}$
127	Mechanical guidance	Using mechanical aids to assist a performer
128	Media	Diversified technologies which act as the main means of mass communication. These include: printed media (newspapers) / broadcast media (tv and radio) / internet or social media (facebook) / outdoor media (billboards)
129	Meniscus	Cartilage acting as a shock absorber between the tibia and femur in the knee joint

130	Metal health and well being	A state of well-being in which every individual realises his/her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community. It works in conjunction with physical and social health.
131	Mental rehearsal	Cognitive relaxation techniques involving control of mental thoughts and imagining positive outcomes.
132	Mesomorph	A somatotype, characterised by a muscular appearance. Individuals with wide shoulders and narrow hips.
133	Minerals	Inorganic substances which assist the body with many of its functions, eg bone formation (Calcium).
134	Motivation	The drive to succeed or the desire (want) to achieve something/to be inspired to do something. This can be: intrinsic – the drive that comes from within (e.g. for pride, satisfaction, a sense of accomplishment) OR Extrinsic – the drive to perform well or to win in order to gain external rewards (e.g. prizes, money, praise).
135	Movement at a joint	Classified into: flexion – decrease in the angle of the bones at a joint / extension – increasing the angle of bones at a joint / abduction – movement away from the midline of the body / adduction – movement towards the midline of the body / rotation - movement around an axis / plantar flexion – pointing the toes at the ankle or increasing the ankle angle / dorsi flexion – toes up at the ankle or decreasing the ankle angle / circumduction – turning or circular motion around a joint (which occurs in more than one plane).
136	Muscular Endurance	Ability of a muscle or muscle group to undergo repeated contractions, avoiding fatigue.
137	Narcotic Analgesics	Drugs that can be used to reduce the feeling of pain.
138	Nutrition	The intake of food, considered in relation to the body's dietary needs. Good nutrition is an adequate, well balanced diet, combined with regular physical activity.
139	Obese	A term used to describe people with a large fat content, caused by an imbalance of calories consumed to energy expenditure. A body mass index (BMI) of over 30 or over 20% above standard weight for height ratio.
140	One rep max	The maximal amount that can be lifted in one repetition by a muscle/group of muscles (with the correct technique).
141	Open skill	A skill which is performed in a certain way to deal with a changing or unstable environment, e.g. to outwit an opponent.
142	Outcome goals	Judging the end result by comparison with other performers
143	Oxygen debt	Temporary oxygen shortage in the body due to strenuous exercise.
144	Oxygen (hypoxic) tents	Tents that contain high oxygen concentrations to speed up recovery after injury
145	Oxyhaemoglobin	This is formed when oxygen combines with haemoglobin
146	Peer group	A group of people of approximately the same age, status and interests
147	Peptide hormones	Drugs that stimulate the production of naturally occurring hormones (eg EPO), which increase red blood cell count/oxygen carrying capacity.
148	Performance goals	Personal standards to be achieved without comparison with other performers.
149	Philanthropic	Attitudes and actions with the aim of benefitting others.
150	Physical health and well being	All body systems working well, free from illness and injury. Ability to carry out everyday tasks. It works in conjunction with social and mental health.
151	Physiology	Study of how our cells, muscles and organs work together, and how they interact.
152	Plane	Imaginary lines depicting the direction of movement. Types of planes: sagittal - forwards and backwards / frontal - left or right / transverse - rotation around the longitudinal axis.

153	Plantar Flexion	Movement at the ankle of where he toes are pointed towards the ground
154	Positive self-talk	Developing cognitive positive thoughts about your own performance.
155	Post season (transition)	Period of rest/active recovery/light aerobic work after the competition period (season).
156	Power	The product of strength and speed, i.e. strength x speed.
157	Prejudice	Preconceived opinion that is not based on reason or actual experience
158	Pre-season (preparation)	It is defined as: the period leading up to competition / usually using continuous, fartlek or interval training sessions to increase aerobic fitness / weight training to build up strenght and muscular endurance and lastly developing techniques specific to the sport in order to be fully prepared for matches at the start of season and therefore be more successful.
159	Principles of overload	Frequency, intensity, time and type (see FITT).
160	Principles of training	Specificity, progressive overload, reversibility and tedium
161	Prime mover (agonist)	Muscle or muscle group responsible for the movement.
162	Prosthetics	Artificial aids, often replacing a limb.
163	Protein	A food source which is predominantly for growth and repair of body tissues
164	Pulse raiser	Any activity that raises heart rate. Usually as part of a warm up, e.g. light jog.
165	Qualitative	More of a subjective than an objective appraisal. Involving opinions relating to the quality of a performance rather than the quantity (e.g. score, placing, number).
166	Quantitative	A measurement which can be quantified as a number, e.g. time in seconds or goals scored. There is no opinion expressed (qualitative). It is a fact.
167	Reaction time	The time taken to initiate a response to a stimulus, ie the time from the initiation of the stimulus (e.g. starting gun in 100 m) to starting to initiate a response (eg starting to move out of the blocks in 100 m).
168	Recovery	Time required to repair the damage to the body caused by training or competition.
169	Rehydration	Consuming water to restore hydration.
170	Reliability	Relating to the consistency and repeatability of a test (ie to produce same or similar scores).
171	Repetitions	The number of times an individual action is performed. A set is a group of repetitions.
172	Residual volume	Volume of air left in the lungs after maximal expiration.
173	Resistance	The load to be moved by a lever system: usually this involved weight when the body's lever systems are involved.
174	Role model	A person looked to by others as an example to be imitated.
175	Rotator cuff	Group of muscles causing rotation at the shoulder
176	Season	A period of time during which competition takes place or training seasons, dividing the year up into sectional parts for pre-determined benefits. Training seasons include: pre-season (preparation) / competition season (peak) / post season (transition)
177	Second class lever	Where the fulcrum lies at one end of the lever with the effort at the other end.
178	Sedentary lifestyle	A lifestyle with irregular or no physical activity.
179	Self-paced skills	The skill is started when the performer decides to start it. The speed, rate or pace of the skill is controlled by the performer. post-season (transition). See these terms for definitions.

180	Skeletal System	Skeletal system provides a framework of bones for movement, in conjunction with the muscular system.
181	Skill	A learned action/learned behaviour with the intention of bringing about pre- determined results, with maximum certainty and minimum outlay of time and energy.
182	Skill classification	Categorisation of sporting skills in accordance with set continua. These include: simple/complex ; open/closed ; self-paced/externally paced ; gross/fine
183	Social groups	People who interact with one another, share similar characteristics and have the sense of unity/togetherness.
184	Social, health and well being	Basic human needs are being met (food, shelter and clothing). The individual has friendship and support, some value in society, is socially active and has little stress in social circumstances. It works in conjunction with physical and mental health.
185	Somatotype	A method of classifying body type. Body types - • ectomorph• endomorph• mesomorph
186	Speed	The maximum rate at which an individual is able to perform a movement or cover a distance in a period of time, putting the body parts into action as quickly as possible. Calculated by: distance ÷ time
187	Spirometer trace	A measure of lung volumes, which includes: tidal volume – volume of air inspired or expired/exchanged per breath / inspiratory reserve volume – the amount of air that could be breathed in after tidal volume / expiratory reserve volume – the amount of air that could be breathed out after tidal volume / residual volume – the amount of air left in the lungs after maximal expiration.
188	Sponsor	An individual or group that provides financial support to an event, activity, person, or organisation.
189	SPORT (principles of training)	Specificity -Making training specific to the sport being played/movements used/muscles used/energy system(s) used / Progressive overload - Gradual increase of the amount of overload so that fitness gains occur ,but without potential for injury. Overload is the gradual increase of stress placed upon the body during exercise training / Reversibility - Losing fitness levels when you stop exercising / Tedium - Boredom that can occur from training the same way every time. Variety is needed.
190	Sponsorship	Provision of funds or other forms of support to an individual or event in return for some commercial return.
191	Sportsmanship	Conforming to the rules, spirit and etiquette of a sport.
192	Static stretching	Holding a stretch still/held/isometric.
193	Steady state exercise	Working continuously at the same intensity
194	Stimulants	Drugs that have an effect on the central nervous system, i.e. they increase mental and/or physical alertness.
195	Strength	The ability to overcome a resistance. This can be explosive, static or dynamic:
196	Stroke Volume	The volume of blood pumped out of the heart by each ventricle during one contraction.
197	Sub maximal	Working below maximal intensity level.
198	Suppleness	As with flexibility, the range of movement possible at a joint.
199	Synovial joint	An area of the body where two or more bones meet (articulate) to allow a range of movements. The ends of the bones are covered in articular cartilage and are enclosed in a capsule filled with fluid. For the purposes of this specification, the following structural features and roles should be known: synovial membrane - secretes synovial fluid / synovial fluid - provides lubrication / joint capsule - encloses/supports / bursae (sack of fluid) - reduces friction / cartilage - prevents friction/bones rubbing together / ligaments - attach bone to bone
200	Systole	Term used to describe the contraction phase of the cardiac cycle.
201	Tangible	Something that can be seen and touched, e.g. a trophy.
202	Target zone	The range within which athletes need to work for aerobic training to take place (60-80% of maximum heart rate).

203	Television match official (TMO)	Used in rugby union and rugby league to make decisions using replays of incidents
204	Tendons	Connective tissue which attach muscles to bones.
205	Third class lever	Where the fulcrum lies at one end of the lever and the effort is in the middle
206	Tidal volume	The volume of air breathed in (or out) during a normal breath
207	Trachea	Also known as the windpipe. Carries air from the mouth/nose to the lungs
208	Training	A well-planned programme which uses scientific principles to improve performance, skill, game ability, motor and physical fitness.
209	Training thresholds	The actual boundaries of the target zone.
210	Vasoconstriction	Reducing the diameter of small arteries to increase blood flow to tissues
211	Vasodilation	Increasing the diameter of small arteries to increase blood flow to tissues
212	Validity	The extent to which a test or method measures what it sets out to measure.
213	Veins	Blood vessels carrying blood towards the heart
214	Ventricles	Lower chambers of the heart which pump blood out of the heart to the arteries
215	Verbal guidance	Guidance that is provided by another person speaking to you
216	Vertebrae	Bones that form the spine/backbone
217	Viscosity	Thickening of the blood.
218	Visual guidance	Guidance that you can see, for example a demonstration.
219	Vitamins	Organic substances that are required for many essential processes in the body, e.g. Vitamin A for structure and function of the skin.
220	Weight Training	The use of weights/resistance to cause adaptation of the muscles.
221	Well-being	Involves physical, mental and social well-being. The dynamic process that gives people a sense of being comfortable, healthy or happy.