

Knowledge Organiser: PE Year 9 Fitness

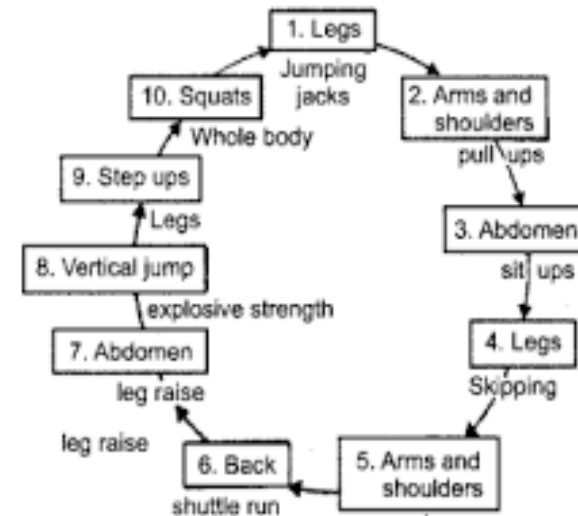
Principles of Training

Key Words	Description
PROGRESSIVE OVERLOAD	Putting greater demands on the body by exercising This will improve fitness as long as the sessions are made more difficult each time by using the FIT principles. The point where exercise is demanding enough to have an effect on the body is called the 'threshold of training'. • There 3 ways; • - Frequency – number of sessions e.g. up to 3 per week - Intensity – increasing distances run, repetitions or weight - Time – length of training sessions
SPECIFICITY	Understanding the needs of the game or event, e.g. a goalkeeper will include reaction work in their training. The pace of training should be consistent to the pace of the game. Also the actions should be the same in training as it is in match situations e.g. a swimmer needs to spend most of their time in the water.
REVERSIBILITY	The body will increase in strength, tone and skill with exercise; however it also loses them without it. After injury or illness, an athlete can lose their strength and skill, up to 3x as fast as they gain it – 'If you don't use it, You lose it!'
TEDIUM	Training should be varied and interesting to prevent boredom.
FREQUENCY	How often the exercise is done (be it an individual set or the whole session) – e.g. Training 3 times a week or 2 per day. Elite performers train more frequently to achieve results good enough. Remember, the body needs time to recover so training very, very hard, every day can be harmful even to an elite performer.
INTENSITY	The difficulty of the exercise – could be the amount of weight or the speed you move. Consider cardiovascular fitness, your pulse rate can show you how intensely you're working. Fitness will increase by working in 60-80% target zone of the maximum heart rate, e.g. Training with heart rate of 120bpm – 160bpm. Strength training is similar, by calculating 60-80% of their maximum weight they can lift and working to it.
TIME	The duration of the Exercise. Keeping your pulse at 60-80% of its maximum for 2minutes is the target. The time begins once the pulse rate hits 60%. The warm up is not included. Also you can vary the duration of each session e.g. 30mins, 45mins or 60mins
TYPE	What kind of exercise you do – For general fitness then personal preference to suit the individual is usually done e.g. swimming, cycling or running, But if its for a specific activity then choice becomes limited as it should reflect the activity. However remember to vary to keep interesting and work all different muscle groups.

Effects of exercise

Short term	Long term
Increased muscle contractions Increased heart rate Increased rate of breathing	Increased bone density Heart muscle increases in size and strength Increased strength of diaphragm and intercostal muscles

Circuit Training



Types of Training	Description
Continuous Training	Involves continuous activity that increases heart rate between 50- 80% over a sustained period of time. It is slow and steady activities e.g. jogging
Interval Training	Involves periods of intense work followed by rest periods. Can be short or long intervals.
Weight Training	Involves using free-standing weights or fixed weights attached to weight training equipment Repetitions are the number of times the weights are lifted Sets are the number of times a weight activity is carried out
Farlek Training	Also known as 'speed play' and involves fast and slow running over a variety of terrain or hills. It is useful for individual sports, e.g. athletics and team sports, e.g. football.
Circuit Training	Involves completing a variety of exercises at stations to exercise different muscle groups Each exercise is carried out for a set time or number of repetitions before moving on to the next station Same muscle group should not be next to each other It can be useful to team sports, e.g. football and racquet sports, and individual sports e.g. running.