



HOLY TRINITY

Sport Science Vocabulary

<u>Y10 & Y11 – R180 / Y10 R183</u>	<u>Y11</u>
<p>R180 - Reducing the Risk of Sports Injuries and dealing with common medical conditions.</p> <p>General Terms Compulsory / Identify / Suggest / Describe / Explain why / State your reason / Analysis & Evaluation.</p> <p>Topic Area 1</p> <p>Extrinsic / Contact / Environment / Hazard.</p> <p>Intrinsic / Individual Variables / Training / Fitness levels / Overuse / Muscle imbalances / Gender / Flexibility / Nutrition / Previous or Recurring injuries / Motivation / Aggression / Arousal or anxiety levels.</p> <p><u>Posture</u> - Poor stance / Gait / Pelvic Tilt / Lordosis / Kyphosis / Round Shoulder / Scoliosis</p> <p>Topic Area 2</p>	<p>R181 - Applying Principles of training: fitness and how it affects skill performance</p> <p>General Terms</p> <p>Mandatory / Internally Assessed Examples (Wide Range / Relevant / Developed) Results / Extensive Range Precision Recording Protocols / Guidelines Data Interpretation / Reliability / Validity Fitness Programme / Comprehensive / Specific / Justified Witness Statement</p> <p>Topic Area 1</p> <p>Progressive Overload / FITTA / Adaptation</p> <p>‘Use it or lose it’ / Regress / Reversibility</p> <p>Individual Characteristics (Age, Gender, Environment, Experience)</p>

Physical - Increased Blood Flow / Flexibility / Pliability / Blood Flow.

Psychological - Heighten or control arousal levels, / 'Get in the zone' or settle nerves / Improve concentration and focus / Increase motivation / Mental rehearsal.

Key Components – Pulse raising / Mobility / Stretching / Dynamic Movements / Skill Rehearsal

Physical - Transition back to a resting state / Circulates blood and oxygen / Removes waste products (Lactic acid).

Key Components – Pulse lowering / Maintenance Stretches / Static Stretches.

Specific Needs - Characteristics of the individual or group / size of group / age and experience of participants / individual fitness level / medical conditions / Environmental factors / Available facilities.

Topic Area 3

Acute / Trauma / Symptoms.

Chronic / Overuse / Continuous Stress.

Soft tissue injuries: Sprains / Strains / Rest, Ice, Compression, Elevation (RICE).

Variance

Topic Area 2

Aerobic - Long Duration / Low Intensity / Examples (Walking, Jogging, Swimming, Rowing, Cycling), Improves Endurance.

Anaerobic – Short Duration / High Intensity / Oxygen Consumption / Energy Demands / Waste Products / Lactic Acid / Examples (Weightlifting Repetitions, Short bursts – sprints) / Improves Speed, Power and Strength.

Strength

Contract / Resistance / Restraining / Pushing / Holding

Power

Strength x Speed / Exerting Muscular Strength Rapidly / Jumping / Throwing

Agility

Change direction quickly / Maintain control / Weaving / Swerving

Balance

Upright / Stable / Centre of Mass / Base of support / Dynamic / Static

Overuse: Tendonitis / Tennis Elbow / Shin splints / Repetition / Over-training / RICE.

Fractures: Open / Closed / Trauma / Collision / Immobilisation / Medical Assessment.

Blisters / Cramp: Protection / Muscle Contraction / Dehydration.

Injuries related to children: Sever's Disease / Inflammation / Growth Plate / Osgood Schlatter's Disease

Topic Area 4

SALTAPS - See, Ask, Look, Touch, Active, Passive, Strength.

RICE / Rehabilitation.

Stretching / Massage / Subacute / Taping / Bandaging / Splints / Slings / Hot and cold treatments.

EAP (Emergency Action Plan)

Emergency personnel: first responder, first aider, coach.

Emergency communication: telephone, emergency numbers, emergency services.

Flexibility

Move joints through a range of motion / Stretching / Reaching

Muscular Endurance

Contracting repeatedly over long periods of Cycling / Rowing / Swimming

Cardiovascular Endurance

Heart / Blood Vessels / Oxygen / Intensity / Long-distance events.

Cardiovascular Training

Continuous / Steady State / Aerobic / Training Zone / Maximum Heart Rate / Interval / Intensity / Anaerobic / Fartlek / Combinations / Speed Play / Terrain

Resistance Training

Working against a 'force' / Weight Training / Free weights / Body resistance / Contraction / Set & Repetitions (Reps) / Hypertrophy / Muscular Strength & Endurance / Circuit / Stations

Power Training

Plyometrics / Bounding / Eccentric & Concentric Contraction / Acceleration Sprint Training

Flexibility Training

Emergency equipment: first aid kits, evacuation chair.

Topic Area 5

Asthma: Coughing / Wheezing / Shortness of Breath / Tightness in the chest / Reassure / Inhaler.

Diabetes: Increased thirst / Extreme tiredness.

Type 1 (insulin-dependent)

Type 2 (non-insulin dependent).

Give insulin if the person is *hyperglycaemic* (high blood sugar) and sugar if the person is *hypoglycaemic* (low blood sugar).

Epilepsy: Seizures.

Response:

Awareness of participants' medical conditions / Check for Emergency Care Plan / Get medical attention (999).

R183 - Sports Nutrition

General Terms

Static Stretching / Active (Participant Only) / Passive - External Force (Partner / Band) / Dynamic Stretching (Rotations / Lunges)

Agility Training

SAQ (Speed, Agility, Quickness) / Explosive / Neuromuscular

Balance Training

Core / Base / Balance Board / Exercise Ball

Topic Area 3

Validity / Protocol / Reliability / Normative Data / Medical Assessment / Benchmark / Comparison Chart

Burpee Test, Squat Test, Wall Squat Test

Vertical Jump Test, Standing Long Jump Test

Shuttle Run Test, Illinois Agility Run

Standing Stork Test

Sit and Reach Test, Trunk Flexion Test

30 second sit-up Test / One minute press-up Test

Optional / Internally Assessed / Characteristics / Healthy, balanced diet / Comprehensively describe / Nutrients / Wide range of examples.

Topic Area 1

'Eatwell Guide' / Energy Balance / Calories / Basal Metabolic Rate (BMR) / Food Groups / Food Allergy / Food Intolerance / Individual taste

Macronutrients / Micronutrients

Carbohydrates / Fats / Proteins / Fibre / Water / Vitamins and minerals.

Glucose / Glycogen / Energy / Growth & Repair / Hydration / Digestion

Simple Carbohydrates (Sugars) / Complex Carbohydrates (Pasta) / Saturated Fats (Butter / Cheese) Unsaturated Fats (Vegetable Sources) / Protein (Meat / Fish / Cereals / Pulses) / Fibre / Roughage (Fruit / Vegetables / Grains) / Vitamins (Fruit / Vegetables) Minerals (Calcium – Milk / Cheese / Iron – Meat / Green Vegetables).

Topic Area 2

Nutrition / Energy sources / Hydrated / Pre-exercise meal / Replenish / Rehydrate

Cooper Run, Harvard Step Test / Multistage Fitness Test (Bleep Test)

Maximal - working at maximum effort or tested to exhaustion e.g. Cooper run test, bleep test.

Sub-maximal - working below maximum effort e.g. Harvard step test.

Conduct / Same Order / Validity

Against Normative Data / Reliability / Average Range

Topic Area 4

Strengths & Weaknesses / Physical Activity Readiness Questionnaire (PARQ) Relevance / Principles / Independent / Comprehensive Evaluation / Improvement Ideas

Name / Age / Gender / Weight / Injuries / Access to Facilities

Client Progress Review / Which components

SMART (Specific, Measureable, Achievable, Realistic, Time Bound)

Short - Medium - Long Term

Low Intensity / Long-duration / Carbo-loading / Glycogen Stores

Short, sharp bursts of energy /

Strength-based / Hypertrophy

Multi-vitamins / Protein Powders, Herbal Remedies / Creatine.

Topic Area 3

Malnutrition / Unbalanced diet / Wrong Proportion.

Overweight / Deterioration / Loss of confidence / Anxiety / High Blood Pressure / Obesity / Cholesterol.

Lack of Energy / Weaker muscles / Impaired Concentration / Eating Disorder (Anorexia) / Illness.

Overheating / Tiredness.

Topic Area 4

Age / Gender / Allergies / Religious Beliefs / Food Budget / Cooking skill / Food Consumption / Healthy Foods / SMART goals (Specific / Measureable / Attainable /

Six weeks

Match Needs / Target Areas / Suitable

Variance / Rest / Work-to-Rest Ratio / Overtraining

Adapting the programme if needed

Evaluate / Adjust (FITTA)

Measurement / Reflection on Self or Interview Subject / Results / Review / Improvement / Boredom / Variety / Intensity / Future Alterations

Realistic / Time-Bound) / Pre-season / Post-season / Format / Aims / Duration.	
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HOLY TRINITY

Btec Sport Vocabulary

<u>Y10 Component 1</u>	<u>Y11 Component 2 & 3</u>
<p>A1 Types and providers of sport and physical activities</p> <p>Learners will explore the different types of sport and physical activities that people may choose to take part in and will be able to compare and contrast the provision of these sports and physical activities from different sectors. ● Types of sport and physical activity: o sports – competitive activities that involve physical exertion, have rules and</p>	<p>A1 Components of physical fitness</p> <p>Learners will know the definition of each component of physical fitness and their potential impact on sporting performance. ● Aerobic endurance – the ability of the cardiorespiratory system to supply oxygen and nutrients to the muscles to sustain low to medium intensity work to delay fatigue. ● Muscular endurance – the ability of the muscular system to continue to</p>

regulations and a National Governing Body of team sports or individual sports.

- Benefits of taking part in sport – improve fitness, meet new people, develop leadership skills, learn team work skills, resilience and self confidence from competition.
- Outdoor activities – activities carried out outdoors or in recreation areas that are adventurous.
- Benefits of taking part in outdoor activities – positive risk taking activities, improved self confidence and self esteem, meet new people, learn new skills, time away from life stresses and electronic devices.
- Physical fitness activities – activities to increase fitness.
- Benefits of taking part in physical activities – meet new people, set fitness goals, improve confidence, improve body composition, improve physical health.
- Provision of sport and physical activity:
 - o public sector to include local authorities and school provision
 - o private sector – provided by organisations who aim to make a profit
 - o voluntary sectors – activities provided by volunteers who have a common interest in the sport /activity.
- Characteristics of the sectors – funding source, aims, quality of provision, accessibility.
- Advantages and disadvantages of the provision of sport in each of the different sectors to the participant to include:
 - o types and range of sport and physical activities provided
 - o types and range of equipment available
 - o cost of participation
 - o access to different types of sport and physical activities
 - o additional products or services to include creche facility, refreshment facilities, hire of equipment, access to sport sector professionals, e.g. sports therapist, personal.

A2 Types and needs of sport and physical activity participants Learners will understand the characteristics of different types of participant and how this affects their different physical, social and mental health needs.

- Types of participant.
- Participants of different ages:
 - o primary school aged children (aged 5–11 years)
 - o adolescents (aged 12–17 years)
 - o adults (aged 18–49 years)
 - o older adults (aged 50 years and up).
- Participants with disabilities to include visual, hearing and physical disabilities.
- Participants with long-term health conditions to include asthma, type 2 diabetes, high blood pressure, coronary heart disease (CHD).
- Physical activity needs of participants – government recommended guidelines for types, frequency and intensity of physical activity for different types of participant.
- o physical health needs – improve fitness, body composition, sleep, immunity to help prevent

contract at a light to moderate intensity to allow repetitive movements throughout a long event or game.

- Muscular strength – the maximum force that can be generated by a muscle or muscle group to improve forceful movements within an activity.
- Speed – distance divided by time to reduce time taken to move the body or a body part in an event or game.
- Flexibility – the range of motion possible at a joint to allow improvements in technique.
- Body composition – the relative ratio of fat mass to fat-free mass in the body allowing variation in body composition dependent on the sport

A2 Components of skill-related fitness Learners will know the definition of each component of skill-related fitness and understand their potential impact on sporting performance.

- Power – the product of speed and strength to allow for explosive movements in sport.
- Agility – the ability to change direction quickly to allow performers to outmanoeuvre an opponent.
- Reaction time – the time taken between a stimulus and the start of a response, useful in fast-paced sports to make quick decisions about what to do.
- Balance – the ability to maintain centre of mass over a base of support, useful to maintain positions in performance sports (static balance) or when on the move in any other sporting situation (dynamic balance).
- Coordination – the ability to move two or more body parts at the same time smoothly and efficiently, to allow effective application of technique.

B1 Techniques, strategies and fitness required for different sports Learners will be able to demonstrate a range of skills and strategies for a selected sport, in both isolated practices and competitive situations.

- Skills, e.g. passing, scoring, travelling, intercepting.
- Strategies, e.g. tactics and decision making.
- Isolated practice – practices that focus on one skill at a time.
- Competitive situation – the number of players, area of play and presence of an official to represent competition standard of play.

B2 Officials in sport Learners will know the roles of different officials for a selected sport and understand the key responsibilities associated with each of these roles.

- Key officials and their roles in sports competitions:
 - o referee/umpire
 - o assistant referee/line umpire
 - o scorers/judges
 - o timekeepers
 - o video review officials.
- Responsibilities of the officials:
 - o

illness, symptoms of long-term health conditions. o social health needs – meet new people, make friends, have fun, develop leadership and team working skills, decrease loneliness. o mental health needs – decrease stress levels, improve work life balance, decrease risk of depression, improve mood, increase self-confidence and self-esteem.

A3 Barriers to participation in sport and physical activity for different types of participant Learners will know about barriers to participation that can prevent some types of participant from taking part in regular sport and physical activity. ● Barriers to participation: o cost of participation: – clothing – equipment – transport o access to sport or physical activity: – location of sport or physical activity – limited accessible transportation – resources – types of sport or physical activity available o time – lack of time due to other commitments: – family – school – work o personal barriers: – body image – lack of self-confidence – parental or guardian influence – limited previous participation – low fitness levels – extended time off from previous participation – concerns that taking part in sport or physical activity may make existing health conditions worse o cultural barriers: – single sex sport or physical activity sessions – social norms of participating in unconventional clothing and availability of appropriate clothing to participate – lack of role models from own cultural background.

A4 Methods to address barriers to participation in sport and physical activity for different types of participant Learners will understand how different methods can be used to address these barriers to participation for different types of participant to increase participation in regular sport and physical activity. ● Cost: o discounted pricing o hiring of equipment o free car parking. ● Access: o public transport discounts o cycle hire to access the facility o free parking o taster days o staff training to support all types of participant and their needs o increased range of provision of sports and physical activities o ramps o assistive technology to include pool hoist, Braille information and signage, hearing loops. ● Time: o creche facilities o extended opening hours.

● Personal barriers: o private changing rooms o allowing participants to wear clothing they feel most comfortable in o use of variety of images of people with different body shapes o parent and child activity sessions to

appearance o equipment o fitness requirements o effective communication o control of players o health and safety.

B3 Rules and regulations in sports Learners will know the key rules and regulation of a selected sport. They will understand how the rules and regulations are applied, the actions an official may take if these rules are not adhered to and how these actions may vary dependent upon the situation. ● Key rules and regulations as stated by the National Governing Body for the sport: o number of players: – number of players allowed to participate at any one time – substitutions – rolling or set number – variations in playing numbers due to different formats of the game. o length of time for play: – number of periods of play – length of each period – length of play determined by time or score – additional time or extra periods of play in particular situations o scoring system: – methods of scoring – differing award of points for particular methods of scoring – how a winner is determined – what happens in the event of a tie o playing area: – dimensions of overall playing area – purpose and dimensions of specific areas within the overall playing area o equipment: – sizes and weights of playing equipment as specified by NGB – required protective equipment – optional protective equipment o starting and restarting play: – how the game begins – how play is restarted after scoring – fouls or infringements – how and when the game ends o non-adherence to the rules: – playing rules specific to each sport, e.g. hitting the ball twice in tennis, passing the ball forward in rugby – out of play area/offside – intentionally harming another player – incorrect travel, e.g. double dribble in basketball o application of rules and regulations by officials: – use of signals – communication of decisions to players and other officials – positioning.

Component 3

C1 Planning drills and conditioned practices to develop participants' sporting skills Learners will know how to work with sports participants to help to improve their sporting skills. They will be able to provide demonstrations of techniques used for different sports skills and provide teaching points to help to develop participants technique to perform the sports skill. They will know how to select and plan for different drills and conditioned practices to develop specific sports skills. Learners will also be able to set up each of the

create familial culture of sport o campaigns to increase participation. ● Cultural barriers: o women only physical activity sessions staffed by females o diversity of staff working at sport or physical activity facility o staff training in cultural awareness. Learning outcome B: Examine equipment and technology required for participants to use when taking part in sport and physical activity Learners will need to understand the different types of equipment used to take part in sport and physical activities. They will also explore the different technology available for participation in different sport and physical activities. They will also need to know about the benefits and limitations of technology for sport and physical activity participation.

B1 Different types of sports clothing and equipment required for participation in sport and physical activity Learners will need to understand the different types of sports clothing and equipment and their uses for participation in different types of sports and physical activities. ● Clothing – sports kit, waterproof clothing, training clothing, e.g. bibs. ● Footwear – trainers, studded boots, sport specific footwear. ● Sport-specific equipment – participation equipment, e.g. balls, rackets; travel-related equipment, e.g. kayak; scoring equipment, e.g. goalposts; fitness training equipment, e.g. dumbbells. ● Protection and safety equipment – mouth protection, head protection, eye protection, body protection, floatation devices; first aid equipment – ice packs, bandages, defibrillator. ● Equipment for people with disabilities or assistive technology – wheelchair, e.g. adapted wheelchair for wheelchair tennis. ● Facilities – indoor facilities, e.g. sports halls, gyms; outdoor facilities, e.g. outdoor pitches, climbing wall, artificial snow domes. ● Officiating equipment – whistle, microphone, earpiece. ● Performance analysis – smart watches, heart rate monitors, applications.

B2 Different types of technology and their benefits to improve sport and physical activity participation and performance Learners will explore a range of different types of technology and its use in sport and physical activity to improve performance and participant experience. ● Clothing to increase performance and experience – improved thermoregulation, clothing designed to improve aerodynamics. ● Footwear – sport-specific new designs or materials; improve grip; rebound.

drills and support participants as they take part in the drills and conditioned practices to improve their sporting skills. ● Drills that can be used to improve specific techniques in different sports: o unopposed stationary drills o drills with the introduction of travel o drills with passive opposition o drills with active opposition. ● Conditioned practices – using rule changes to focus on a specific skill. ● Demonstrations of the technique: o use of self or peer o positioning to ensure all participants can see. ● Teaching points: o providing key teaching points to highlight correct and safe way to perform technique o use of short sentences or key points.

C2 Drills to improve sporting performance Learners will understand how different drills and adapted games can improve sporting techniques and performance. They will also understand how to use each type of drill and adapted game to develop sporting technique for different types of participant. Learners will also know how to set up each of the drills and be able identify what pieces of equipment are needed for each drill. ● Organisation and demonstration of drills and conditioned practices to participants: o space – areas used o equipment o organisation of participants, e.g. in working pairs or groups o timing o demonstrations o positioning. ● Supporting participants taking part in practical drills and conditioned practices: o observing participants o providing instructions o providing teaching points o providing feedback to participants.

● Sport-specific equipment – new materials for lightness and strength to include composite materials, e.g. a tennis racquet; new design of equipment to improve performance, e.g. golf driver design. ● Protection and safety equipment – improved protection design; lighter weight; improved performance, e.g. shape of cycle helmets to improve aerodynamics. ● Equipment for people with disabilities or assistive technology – prosthetics; sport-specific wheelchairs; equipment to support people with visual and hearing impairments. ● Facilities – facilities that simulate environments to replicate competition in other locations; all weather surfaces; surfaces to reduce the risk of injury. ● Officiating – computer assisted systems; video assisted decision making. ● Performance analysis – action cameras, GPS, applications, sensors on sports clothing or equipment.

B3 The limitations of using technology in sport and physical activity
Learners will need to develop an understanding of the limitations that technology can have for sport and physical activity participation. ● Time – setting up, using equipment, compiling data, giving feedback to participant. ● Access to technology – equality and unfair advantages as not all participants have access to technology. ● Cost of technology – initial cost and follow-up maintenance of equipment. ● Accuracy of data provided by equipment. ● Usability – specific training required. Learning outcome C: Be able to prepare participants to take part in physical activity
Learners will learn about the warm-up process that is required to prepare the body to take part in physical activity and the responses of the cardiorespiratory and musculoskeletal systems at each stage of the warm-up. Learners will be able to plan and deliver warm-ups for different physical activities and for different types of participant.

C1 Planning a warm-up
Learners will know about the types of activities that should be included in a pulse raiser, a mobiliser and preparation stretch and be able to plan a warm-up to cover each component. They will also understand how the cardiorespiratory and musculoskeletal systems respond to each component of a warm-up. ● Types of activities in the pulse raiser – activities that gradually increase in intensity to increase the heart rate. ● Response of the cardiorespiratory system to the pulse raiser: o increased heart rate o increased breathing rate o

increased depth of breathing o increased supply of oxygen to the working muscles o increased removal of carbon dioxide. ● Response of the musculoskeletal system: o increased temperature of the muscles o increased pliability of the muscles o reduced risk of muscle strain. ● Types of activities in the mobiliser – activities that take the joints through their range of movement starting with small movements and making these bigger as the warm-up progresses. ● Response of the cardiorespiratory system to the mobiliser: o slight drop in heart rate as intensity of exercise lowers o slight drop in breathing rate as intensity of exercise lowers. ● Response of the musculoskeletal system to the mobiliser: o increased production of synovial fluid in the joints to increase lubrication of joint and increase range of movement at the joint. ● Types of activities in the preparation stretch – activities to stretch the main muscles that will be used in the physical activity: o location of main muscles – deltoids, biceps, triceps, erector spinae, abdominals, obliques, hip flexors, gluteus maximus, quadriceps, hamstrings, gastrocnemius o types of static and dynamic stretching for each muscle group: – simple stretches – compound stretches. ● Response of the cardiorespiratory system to the preparation stretch: o slight drop in heart rate and breathing rate for static stretches o maintained elevated heart and breathing rate for dynamic stretches. ● Response of the musculoskeletal system to the preparation stretch: o extending muscles so that they are fully stretched and less likely to tear during the sport or activity session.

C2 Adapting a warm-up for different categories of participants and different types of physical activities Learners will know how to adapt warm-up activities to make them appropriate for the needs of different types of participant and how to make the activities in a warm-up specific to different types of physical activity. ● Adapting warm-ups for different categories of participants: o vary intensity of activities o low impact and high impact options o vary timing of warm-up – longer time frame for beginners, participants with low fitness levels and those aged 50 plus o types of stretch used – simple stretches for beginners, compound stretch for moderate to advanced participants. ● Adapting the warm-up to make it specific to a physical activity: o introduction of equipment in the warm-up that is specific to the physical activity o using movements and

activities from the physical activity in the warm-up o stretching the main muscles required for the specific physical activity.

C3 Delivering a warm-up to prepare participants for physical activity

Learners will be able to deliver the different component of a warm-up to prepare participants to take part in physical activity. ● Organisation and demonstration of the warm-up activities: o space – areas used o

equipment o organisation of participants o timing o demonstrations o positioning. ● Supporting participants as they take part in the warm-up: o

observing participants o providing instructions o providing teaching points o providing feedback to participants