Curriculum Map

Subject: PE - Cambridge National **Year group: 10**

Time period	Unit R182 The body's response to physical activity and how technology informs this (Sept - Jan)	Unit R181 Applying the principles of training: fitness and how it affects skill performance (Jan - Oct)	Unit R180 Reducing the risk of sports injuries and dealing with common medical conditions (Oct - May)

Content
 	
Declarative Knowledge – 'Know What'
	Topic Area 1:
	The cardio-respiratory system and how the use of technology supports different types of sports and their intensities
	1.1 Components, function and role of cardio-respiratory system during exercise
	- Components:
	  - Heart – ventricles, atria, valves
	  - Blood cells vessels – arteries, veins, capillaries
	  - Respiratory system – trachea, lungs, alveoli, diaphragm
	- Function and role:
	  - Heart rate / pulse rate
	  - Blood pressure – stroke volume and cardiac output
	  - Gaseous exchange – inhalation and exhalation
	1.2 Cardio-respiratory sports technology
	- Technology that can inform how the cardio-respiratory system is responding whilst performing in sport during warm up and performance
	- Information that technology can give sports
	- performers on their long-term participation in physical activity
	- The benefits and drawbacks of sports technology to the sports performer
		Topic Area 1:
		Components of fitness applied in sport
		1.1 Relevance of components of fitness to different sports
		- The definition of, and suitable fitness tests used, to measure each component of fitness
		- Fitness component requirements of sports
		- Justification of most important components of fitness
		1.2 Assess components of fitness
		- Fitness tests for components of fitness:
		- Collect and interpret the results of fitness tests:
		- Strengths and areas of improvement of each fitness component:
		1.3 Application of components of fitness to skill performance
		- Devising skill based fitness tests:
		- Conduct the tests devised
		- Collect, record, and interpret the results of skill based fitness tests:
		-
		
		Topic Area 2:
		Principles of training in sports
		Principles of training and goal setting in a sporting context
		- The definition and application of each principle of training and goal setting:
		2.2 Methods of training and their benefits
		- Advantages and disadvantages of the
		- structure of each training method:
		- Aerobic exercise:
		- Anaerobic exercise:
		
		Topic Area 3:
			Topic Area 1:
			Different factors which influence the risk and severity of injury
			1.1 Extrinsic factors
			- Types of sports activity
			- Coaching/Instructing/Leading
			- Environment
			- Equipment
			1.2 Intrinsic factors
			- Individual variables
			- Psychological factors
			- Reasons for aggression
			- Mental strategies
			
			Topic Area 2:
			Warm up and cool down routines
			2.1 Key components of a warm up
			- Key components of a warm up
			2.2 Physiological and psychological benefits of a warm up
			- Physiological benefits
			- Psychological benefits
			2.3 Key components of a cool down
			- Pulse lowering
			- Stretching
			2.4 Physiological benefits of a cool down
			- Physiological benefits
			
			Topic Area 3:

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	Topic Area 2: **The musculo-skeletal system and how the use of technology supports different types of sports and their movements** 2.1 The components and role of the musculo-skeletal system in producing movement - Major bone groups - Skeletal muscle groups - Synovial joints - Ball and socket, Hinge, Gliding, Pivot - Connective tissue - The role of the components in producing the types of movement: 2.2 Musculo-skeletal sports technology - Technology that can inform how the musculo-skeletal system is responding to short- and long-term participation in physical activity - The benefits and drawbacks of this technology to the sports performer **Topic Area 3:** **Short-term effects of exercise on the cardio-respiratory and musculo-skeletal systems** 3.1 The different short-term effects of exercise on the cardio-respiratory and musculo-skeletal systems - Changes in the: - Heart rate, stroke volume, cardiac output - Breathing rate, gaseous exchange - Range of movement of joints	**Organising and planning a fitness training programme** Factors when designing a fitness training programme - Considerations to inform planning - Applying principles of training 3.2. Planning a fitness based training programme - Elements of training programmes - How to monitor progress and adapt a programme 3.3 Recording results from fitness training programme - Post programme tests - Achievement recognised **Topic Area 4:** **Evaluate own performance in planning and delivery of a fitness training programme** 4.1 Effectiveness of a fitness training programme - Reflections on the fitness training programme - considering the: goals set, training methods used and fitness component links correctly to skill tests - Strengths and areas for improvement of the - fitness training programme: - Further development suggestions for improvements to the fitness training programme	**Different types and causes of sports injuries** 3.1 Acute injuries - Overview of acute injuries - Soft tissue and hard tissue injuries - Strains - Sprains - Skin damage - Fractures - Dislocations - Head injuries 3.2 Chronic injuries - Overview of chronic injuries - Tendonitis - Epicondylitis - Shin splints - Stress fractures **Topic Area 4:** **Reducing risk, treatment and rehabilitation of sports injuries and medical conditions** 4.1 Measures that can be taken before and during participation in sport or physical activity to reduce risk and severity of injury/medical conditions - 4.1.1 Safety checks - 4.1.2 Strategies to help reduce the risk of sports - injuries and medical conditions - 4.1.3 Emergency Action Plans (EAP) 4.2 Responses and treatment to injuries and medical conditions in a sporting context - 4.2.1 SALTAPS on-field assessment routine - 4.2.2 DRABC - 4.2.4 PRICE therapy - 4.2.5 Use of X-rays to detect injury - 4.2.6 Overview of treatments/therapies - 4.2.7 Different psychological effects of dealing with injuries and medical conditions including treatment and long-term rehabilitation **Topic Area 5:** **Causes, symptoms and treatment of medical conditions**

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	Topic Area 4:
	Long-term effects of exercise on the cardio-respiratory and musculo-skeletal systems
	4.1 The long-term effects of exercise on the cardio-respiratory and musculo-skeletal systems
	- Changes:
	  - In muscle size and strength
	  - In resting heart rate/stroke volume/cardiac output
	  - In heart rate recovery
	  - In flexibility
	  - In muscle recovery / DOMs / Lactic acid
	  - In lung capacity
	- When participating in to different intensities of sporting activities including:
	  - Short high intensity sport
	  - Endurance sports
	  - Strength based sports
			5.1 Asthma
			- Overview of asthma and asthma attacks
			- Causes/triggers of asthma
			- Common Symptoms of asthma
			- Treatment
			5.2. Diabetes
			- Overview of Type 1 and Type 2 diabetes -
			- differences between Type 1 and Type 2 in relation to age and lifestyle
			- Causes of Type 1 and Type 2 diabetes
			- Common symptoms of Type 1 and Type 2
			- diabetes
			- Treatment of Type 1 and Type 2 diabetes:
			- Monitoring and treatment of different blood
			- sugar levels
			5.3 Epilepsy
			- Overview of epilepsy
			- Common causes/triggers of epilepsy
			- Common symptoms of seizures affecting different parts of the body
			- Treatment
			5.4 Sudden Cardiac Arrest (SCA)
			- Overview of SCA
			- Causes of SCA
			- Symptoms of SCA
			- Treatment for SCA
			5.5 Other medical conditions
			- Overview of hypothermia
			- Causes of hypothermia
			- Symptoms of hypothermia
			- Treatment for hypothermia
			- Overview of heat exhaustion
			- Causes of heat exhaustion
			- Symptoms of heat exhaustion
			- Treatment for heat exhaustion
			- Overview of dehydration
			- Causes of dehydration
			- Symptoms of dehydration
			- Treatment for dehydration

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Skills *Procedural Knowledge – 'Know How'*	**Topic Areas 1, 2 and 3** **Describe** the techniques used to gather cardio-respiratory and musculo-skeletal systems data before and after completing a training activity. Supported with a **range of data** showing the changing variables. **Outlines / makes links** between the differing intensities in the training activities, and the short- term responses of both the cardio- respiratory and musculo-skeletal systems. **Discuss** why these have occurred. **Outlines / Explains** what benefits these short-term responses could make to their performance in a selected sport activity. **Topic Areas 1, 2 and 4** **Discuss** the long-term effects of exercise on the cardio-respiratory and musculo-skeletal systems, **supported** with examples from a selected sport activity. **Describe** adaptations and provide explanations why they have occurred, using a range of examples from a selected sport activity. **Discuss** the long-term benefits and drawbacks of the adaptations to them as a performer, using a range of examples from a selected sport activity. **Topic Area 1** **Describe** how a range/ type of technology provides them as a performer and / or their coach with information regarding the cardio-respiratory system to support them during training and to maximise participation in their selected activity. **Outline / Explain** how the technology can maximise benefits and / or minimise drawbacks for long-term participation in their selected activity. **Topic Area 2** Describe how a range / type of technology provides them as a performer and / or their coach with information regarding the musculo-skeletal system to support them during training and to maximise participation in their selected activity. **Outline / Explain** how the technology can maximise benefits and/ or minimise drawbacks for long-term participation in their selected activity.	**Topic Area 1** Fitness tests are **described** with links to the correct protocol **Analysis** of the data from fitness tests, including what it means for your fitness levels **Link** and **demonstrate** a range of skills that are relevant for the components of fitness **Analyse** strengths and weaknesses in relation to the data from fitness tests **Topic Area 2** **Describe** SPOR and FITT principles **Describe** SMART goals with relevant targets **Analyse applying** the principles to a training programme **Analyse** the selected training methods with a comparison of aerobic and anaerobic exercise **Topic Area 3** **Produce** an appropriate plan which considers most of the requirements for an effective and safe fitness training programme. **Produce** an appropriate risk assessment which considers most of the requirements for a safe fitness training programme. **Topic Area 4** **Describe** areas that went well and didn't go well in training programme **Describe** areas that need to be adapted in the planned fitness training programme. With **analysis** when altering the plan with altering the plan. **Analysis** of the effectiveness of the fitness training programme. Makes reference to the goals and objectives. .	**Knowledge** - Be able to **identify** or **recognise** a given item, for example on a diagram Use **direct recall** to answer a question, for example the definition of a term. **Understanding** To **assess** and **evidence** the perceived meaning of something in greater depth than straight identification or recall. Understanding will be expressed and presented using terms such as: **how; why; when; reasons for; benefits and drawbacks of; advantages and disadvantages** of; purpose of; suitability of; recommendations for improvement; pros and cons; appropriateness of something to/in different contexts.

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Key Questions	What are the short term effects of exercise on the musculo-skeletal system? What are the term effects of exercise on the musculo-skeletal system? What are the short term effects of exercise on the cardio-respiratory system? What are the long term effects of exercise on the cardio-respiratory system? How does the cardio-respiratory system and the use of technology support different types of sports and their intensities? How does the musculo-skeletal system and the use of technology support different types of sports and their intensities?	What are the components of fitness? What are the fitness requirements for a given sport? What are the principles of training How do you test a named component of fitness? What is the difference between aerobic and anaerobic exercise??	Other than a fracture, identify four different types of acute injury that can occur at the knee. Other than aggression, identify two psychological factors that can influence injury when playing sport Identify four symptoms of asthma. State two different symptoms of epilepsy for each body part. Other than hydration and medical conditions, identify four intrinsic factors that can influence injury. SALTAPS is used to remember the on-field injury assessment routine. State the words that the first and last 'S' in SALTAPS stand for. Identify a practical example for each warm up component and explain the main purpose of each practical example State the two components of a cool down. Describe four physiological benefits of a cool down. Using practical examples, describe two ways that coaching can cause injury in contact sports. Other than the physical nature of the game, identify two reasons why ice hockey players may become aggressive. Analyse how extrinsic factors can influence the risk of different types of fracture when participating in sporting activities. In your response, you should use different practical examples of how fractures can occur.
Assessment	Assignment 1 Written documents Assignment 2 Written document Assignment 3 Written document Assignment 4 Written document The assignment briefs for these will change yearly, which are dictated by OCR, however, will still assess using the same criteria. All assignments are internally assessed and externally moderated.	Assignment 1 Written documents Assignment 2 Written document Assignment 3 Written document Assignment 4 Written document The assignment briefs for these will change yearly, which are dictated by OCR, however, will still assess using the same criteria. All assignments are internally assessed and externally moderated.	Externally assessed written examination **Section A** This will have a total of 25 marks, made up of an Multiple Choice style questions and a number of short to medium response questions. **Section B** This will have context-based questions. Students will be presented with a short scenario and will apply their knowledge of sport concepts to produce relevant responses It will include short/medium answer questions, extended response analysis and evaluation questions *all topic areas and its teaching content may be assessed either as knowledge, understanding or as applied practical examples across a range of sporting activities.

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Literacy/Numeracy/ SMSC/Character	Extended writing Interpretation of data Independent research Reading and decoding research Aspiration, Resilience, Confidence, Initiative	Data Handling and interpretation Extended writing Independent research Reading and decoding research Aspiration, Resilience, Confidence, Initiative	Extended writing questions Short answer questions Reading and decoding exam questions Interpretation of diagrams of graphs Cultural references related to sporting examples Aspiration, Resilience, Confidence, Initiative