

Cambridge National in Sport Science

Years 9, 10 & 11

Scheme of Learning – from September 2022

Subject Leader: Mr. J. Nuttall

Topics by term	Unit Overview					
	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 9	R180: Reducing the risk of sports injuries and dealing with common medical conditions	R180: Reducing the risk of sports injuries and dealing with common medical conditions	R182: The body's response to physical activity and how technology informs this	R182: The body's response to physical activity and how technology informs this	R181: Applying the principles of training: fitness and how it affects skill performance	R181: Applying the principles of training: fitness and how it affects skill performance
Year 10	R181: Applying the principles of training: fitness and how it affects skill performance	R181: Applying the principles of training: fitness and how it affects skill performance	R181: Applying the principles of training: fitness and how it affects skill performance	R181: Applying the principles of training: fitness and how it affects skill performance	R182: The body's response to physical activity and how technology informs this	R182: The body's response to physical activity and how technology informs this
Year 11	R180: Reducing the risk of sports injuries and dealing with common medical conditions	R180: Reducing the risk of sports injuries and dealing with common medical conditions	R180: Reducing the risk of sports injuries and dealing with common medical conditions	R180: Reducing the risk of sports injuries and dealing with common medical conditions	R180: Reducing the risk of sports injuries and dealing with common medical conditions	n/a

OCR Cambridge National in Sport Science (J828)

Specification	Big Questions	Topic Area: Main Items and Optional Learning Objectives	Outcomes	Key Terms/ Concepts Literacy Numeracy	Assessment and Homework Tasks	Resources	Personal Development Curriculum Links (SMSC, British Values, PSHE)
R180: Reducing the risk of sports injuries and dealing with common medical conditions							
Topic Area 1 – Different factors which influence the risk and severity of injury							
	<u>Big Question 1:</u> - How do different extrinsic factors influence the risk and severity of injury? <u>Big Question 2:</u> - How do different intrinsic factors influence the risk and severity of injury?	1.1.1 Types of sports activity 1.1.2 Coaching / instructing / leading 1.1.3 Environment 1.1.4 Equipment 1.2.1 Individual variables 1.2.2 Psychological factors 1.2.3 Reasons for aggression 1.2.4 Mental strategies	By completing this unit students will prepare as a participant to take part in physical activity in a way which minimises the risk of injuries occurring. It will also prepare them to know how to react to common injuries that can occur during sport and physical activity, and how to recognise the symptoms of some common medical conditions. <u>Topics include:</u>	- Extrinsic factors - Intrinsic factors - Contact sports - Non-contact sports - Spotters - Hypothermia - Dehydration - Heat exhaustion - Veterans - Fitness - Training - Flexibility - Ability - Technique - Nutrition - Hydration - Psychological factors - Motivation - Arousal	This unit is externally assessed. It is synoptic and must be completed at the end of the course. There is a terminal assessment rule in place. The exam is out of 70 marks and students are allowed 1h15m. Section A has 25 marks and is multiple choice or short response questions. Section B has 45 marks and is medium-long response questions. It is worth 40% of the overall grade.	- ICT Classroom - PowerPoint - Knowledge Organiser - EverLearner platform - Student textbooks - Access to Sports Hall	Students develop a sense of enjoyment and fascination in learning about themselves, others and the sporting world around them. Students are encouraged to use their imagination and creativity in their learning, and showcase a willingness to reflect on their own and others

			▪ Different factors which influence the risk and severity of injury ▪ Warm up and cool down routines ▪ Different types and causes of sports injuries ▪ Reducing risk, treatment and rehabilitation of sports injuries and medical conditions ▪ Causes, symptoms and treatment of medical conditions.	▪ Anxiety ▪ Stress ▪ Confidence ▪ Aggression ▪ Direct aggression ▪ Channelled aggression ▪ Retaliation ▪ Anabolic steroids ▪ Mental rehearsal ▪ Imagery ▪ Selective attention	In Year 9 and Year 11, students will complete Week 3 termly assessments and end of topic tests (EOTTs). Homework is set on TheEverLearner platform where teachers can monitor student knowledge and progress. It is recommended that students do 30 minutes of homework for every hour they spend in class.		sporting experiences. This course encourages a willingness to participate in sporting opportunities that will help to develop positive attitudes towards different religious, ethnic and socio-economic groups in the local, national and global communities. Students are taught that the only way you can achieve in sport to a high standard is if you work hard and if you can discipline yourself to train and apply yourself.
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Topic Area 2 – Warm up and cool down routines

	<u>Big Question 3:</u> - What are the key components of a warm up? <u>Big Question 4:</u> - What are the physiological and psychological benefits of a warm up? <u>Big Question 5:</u> - What are the key components and physiological benefits of a cool down?	2.1 Key components of a warm up 2.2.1 Physiological benefits of a warm up 2.2.2 Psychological benefits of a warm up 2.3 Key components of a cool down 2.4 Physiological benefits of a cool down	By completing this unit students will prepare as a participant to take part in physical activity in a way which minimises the risk of injuries occurring. It will also prepare them to know how to react to common injuries that can occur during sport and physical activity, and how to recognise the symptoms of some common medical conditions. <u>Topics include:</u> - Different factors which influence the risk and severity of injury - Warm up and cool down routines - Different types and causes of sports injuries - Reducing risk, treatment and rehabilitation of	- Warm up - Dynamic stretches - Adrenaline - Lactic Acid - Anaerobic - Cool down - Maintenance stretches - Static stretches - Proprioceptive neuromuscular facilitation (PNF) - Delayed onset muscle soreness	This unit is externally assessed. It is synoptic and must be completed at the end of the course. There is a terminal assessment rule in place. The exam is out of 70 marks and students are allowed 1h15m. Section A has 25 marks and is multiple choice or short response questions. Section B has 45 marks and is medium-long response questions. It is worth 40% of the overall grade. In Year 9 and Year 11, students will complete Week 3 termly assessments and end of topic tests (EOTTs). Homework is set on TheEverLearner platform where	- ICT Classroom - PowerPoint - Knowledge Organiser - EverLearner platform - Student textbooks - Access to Sports Hall	Students develop a sense of enjoyment and fascination in learning about themselves, others and the sporting world around them. Students are encouraged to use their imagination and creativity in their learning, and showcase a willingness to reflect on their own and others sporting experiences. This course encourages a willingness to participate in sporting opportunities that will help to develop
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			sports injuries and medical conditions Causes, symptoms and treatment of medical conditions.		teachers can monitor student knowledge and progress. It is recommended that students do 30 minutes of homework for every hour they spend in class.		positive attitudes towards different religious, ethnic and socio-economic groups in the local, national and global communities. Students are taught that the only way you can achieve in sport to a high standard is if you work hard and if you can discipline yourself to train and apply yourself.
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Topic Area 3 – Different types and causes of sports injuries

<u>Big Question 6:</u> What are the types and causes of acute injuries?	3.1.1 Overview of acute injuries 3.1.2 Soft tissue and hard tissue injuries 3.1.3 Strains 3.1.4 Sprains 3.1.5 Skin damage	By completing this unit students will prepare as a participant to take part in physical activity in a way which minimises the risk of injuries occurring.	- Acute injuries - Sudden trauma - Soft tissue injuries - Hard tissue injuries - Strains - Sprains	This unit is externally assessed. It is synoptic and must be completed at the end of the course. There is a terminal assessment rule in place.	- ICT Classroom - PowerPoint - Knowledge Organiser - EverLearner platform	Students develop a sense of enjoyment and fascination in learning about themselves,
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	<u>Big Question 7:</u> What are the types and causes of chronic injuries?	3.1.6 Fractures 3.1.7 Dislocations 3.1.8 Head injuries 3.2.1 Overview of chronic injuries 3.2.2 Tendonitis 3.2.3 Epicondylitis 3.2.4 Shin splints 3.2.5 Stress fractures	It will also prepare them to know how to react to common injuries that can occur during sport and physical activity, and how to recognise the symptoms of some common medical conditions. <u>Topics include:</u> - Different factors which influence the risk and severity of injury - Warm up and cool down routines - Different types and causes of sports injuries - Reducing risk, treatment and rehabilitation of sports injuries and medical conditions - Causes, symptoms and treatment of medical conditions.	- Ligaments - Anterior cruciate ligament - Abrasion - Cut - Laceration - Contusion - Blister - Fracture - Open fracture - Closed fracture - Dislocation - Concussion - Dementia - Alzheimer's disease - Chronic injuries - Overuse injuries - Tendonitis - Epicondylitis - Shin splints - Stress fracture	The exam is out of 70 marks and students are allowed 1h15m. Section A has 25 marks and is multiple choice or short response questions. Section B has 45 marks and is medium-long response questions. It is worth 40% of the overall grade. In Year 9 and Year 11, students will complete Week 3 termly assessments and end of topic tests (EOTTs). Homework is set on TheEverLearner platform where teachers can monitor student knowledge and progress. It is recommended that students do 30 minutes of homework for every hour they spend in class.	- Student textbooks - Access to Sports Hall	others and the sporting world around them. Students are encouraged to use their imagination and creativity in their learning, and showcase a willingness to reflect on their own and others sporting experiences. This course encourages a willingness to participate in sporting opportunities that will help to develop positive attitudes towards different religious, ethnic and socio-economic groups in the local, national
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							and global communities. Students are taught that the only way you can achieve in sport to a high standard is if you work hard and if you can discipline yourself to train and apply yourself.
Topic Area 4 – Reducing risk, treatment and rehabilitation of sports injuries and medical conditions							
<u>Big Question 8:</u> - How can you reduce the risk and severity of an injury or medical condition? <u>Big Question 9:</u> - What are common responses and treatments to 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) 4.2.1 SALTAPS 4.2.2 DRABC 4.2.3 Recovery position 4.2.4 PRICE 4.2.5 Use of	By completing this unit students will prepare as a participant to take part in physical activity in a way which minimises the risk of injuries occurring. It will also prepare them to know how to react to common injuries that can occur during sport and physical activity, and how to recognise the symptoms of some	- Hazard - Risk - Risk assessment - Medical - Screening - Electrocardiogram (ECG) - Emergency action plan (EAP) - SALTAPS - Acronym - DRABC - Recovery position - PRICE - Massage - Ultrasound - Electrotherapy	This unit is externally assessed. It is synoptic and must be completed at the end of the course. There is a terminal assessment rule in place. The exam is out of 70 marks and students are allowed 1h15m. Section A has 25 marks and is multiple choice or short response questions. Section B has 45 marks and is medium-	- ICT Classroom - PowerPoint - Knowledge Organiser - EverLearner platform - Student textbooks - Access to Sports Hall	Students develop a sense of enjoyment and fascination in learning about themselves, others and the sporting world around them. Students are encouraged to use their imagination and creativity in their	

	▪ 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	common medical conditions. <u>Topics include:</u> ▪ Different factors which influence the risk and severity of injury ▪ Warm up and cool down routines ▪ Different types and causes of sports injuries ▪ Reducing risk, treatment and rehabilitation of sports injuries and medical conditions ▪ Causes, symptoms and treatment of medical conditions.	▪ Hydrotherapy ▪ Cryotherapy ▪ Contrast therapy ▪ Painkillers ▪ Analgesics ▪ Ibuprofen ▪ Support ▪ Kinesiology tape ▪ Neoprene ▪ Bandaging ▪ Immobilisation ▪ Cast ▪ Splint ▪ Sling	long response questions. It is worth 40% of the overall grade. In Year 9 and Year 11, students will complete Week 3 termly assessments and end of topic tests (EOTTs). Homework is set on TheEverLearner platform where teachers can monitor student knowledge and progress. It is recommended that students do 30 minutes of homework for every hour they spend in class.	learning, and showcase a willingness to reflect on their own and others sporting experiences. This course encourages a willingness to participate in sporting opportunities that will help to develop positive attitudes towards different religious, ethnic and socio-economic groups in the local, national and global communities. Students are taught that the only way you can achieve in sport to a high standard is if you work hard
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							and if you can discipline yourself to train and apply yourself.
Topic Area 5 – Causes, symptoms and treatment of medical conditions							
<u>Big Question 10:</u> What are the common causes, symptoms and treatments of medical conditions?	5.1 Asthma 5.2 Diabetes 5.3 Epilepsy 5.4 Sudden Cardiac Arrest (SCA) 5.5 Other medical conditions 5.5.1 Overview of hypothermia 5.5.5 Overview of heat exhaustion 5.5.9 Overview of dehydration	By completing this unit students will prepare as a participant to take part in physical activity in a way which minimises the risk of injuries occurring. It will also prepare them to know how to react to common injuries that can occur during sport and physical activity, and how to recognise the symptoms of some common medical conditions. <u>Topics include:</u> - Different factors which influence the risk and severity of injury - Warm up and cool down routines	- Asthma - Inhaler - Nebuliser - Glucose - Insulin - Diabetes - Ketones - Diabetic ketoacidosis (DKA) - Insulin-dependent - Insulin-resistant - Hypoglycaemia - Hyperglycaemia - Epilepsy - Seizures - Triggers - Fatigue - Anti-epileptic drugs (AEDs) - Ketogenic diet - Sudden cardiac arrest (SCA) - Comotio cordis - Electrolytes	This unit is externally assessed. It is synoptic and must be completed at the end of the course. There is a terminal assessment rule in place. The exam is out of 70 marks and students are allowed 1h15m. Section A has 25 marks and is multiple choice or short response questions. Section B has 45 marks and is medium-long response questions. It is worth 40% of the overall grade. In Year 9 and Year 11, students will complete Week 3 termly assessments	- ICT Classroom - PowerPoint - Knowledge Organiser - EverLearner platform - Student textbooks - Access to Sports Hall	Students develop a sense of enjoyment and fascination in learning about themselves, others and the sporting world around them. Students are encouraged to use their imagination and creativity in their learning, and showcase a willingness to reflect on their own and others sporting experiences. This course encourages a	

			▪ Different types and causes of sports injuries ▪ Reducing risk, treatment and rehabilitation of sports injuries and medical conditions ▪ Causes, symptoms and treatment of medical conditions.		and end of topic tests (EOTTs). Homework is set on TheEverLearner platform where teachers can monitor student knowledge and progress. It is recommended that students do 30 minutes of homework for every hour they spend in class.		willingness to participate in sporting opportunities that will help to develop positive attitudes towards different religious, ethnic and socio-economic groups in the local, national and global communities. Students are taught that the only way you can achieve in sport to a high standard is if you work hard and if you can discipline yourself to train and apply yourself.
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R181: Applying the principles of training: fitness and how it affects skill performance

Topic Area 1 – Components of fitness applied in sport

	<u>Big Question 1:</u> - How are components of fitness relevant to different sports? <u>Big Question 2:</u> - Can you justify why different components of fitness are relevant for different sports? <u>Big Question 3:</u> - What fitness tests are used for each component of fitness?	1.1.1 The definition of, and suitable fitness tests used, to measure each component of fitness 1.1.2 Fitness component requirements of sports 1.1.3 Justification of most important components of fitness 1.2.1 Fitness tests for components of fitness 1.2.2 Collect and interpret the results of fitness tests 1.2.3 Strengths and areas of improvement of	By completing this unit, students will conduct a range of fitness tests, understand what they test and their advantages and disadvantages. Students will also learn how to design, plan and evaluate a fitness training programme. They will then interpret the data collected from these fitness tests and learn how best to feed this back. <u>Topics include:</u> - Components of fitness applied in sport - Principles of training in sport - Organising and planning a fitness training programme - Evaluate own performance in	- Cardiovascular endurance - Stamina - Muscular endurance - Aerobic - Speed - Strength - Power - Agility - Balance - Flexibility - Co-ordination - Reaction time - Maximum oxygen uptake (VO2 Max) - Protocol - Validity - Reliability - Maximal tests - Sub-maximal tests - Questionnaire - PAR-Q	This is a mandatory, non-examined assessed (NEA) unit. Students will be entered for assessed in June of Year 10. Assessment is via an OCR-set assignment, which is marked by teachers and moderated by OCR examiners. The unit is assessed through five practical tasks, each of which needs to be evidenced. It is out of 80 marks in total and is worth 40% of the overall grade. In Year 9, students will complete Week 3 termly assessments and end of topic tests (EOTTs).	- ICT Classroom - PowerPoint - Knowledge Organiser - EverLearner platform - Student textbooks - Access to Sports Hall (for multistage fitness test and training methods) - Access to free weights. - Fitness testing equipment: sit and reach box, grip dynamometer, benches for step test, stop watches, metronome, vertical jump board, skinfold callipers.	Students develop a sense of enjoyment and fascination in learning about themselves, others and the sporting world around them. Students are encouraged to use their imagination and creativity in their learning, and showcase a willingness to reflect on their own and others sporting experiences. This course encourages a willingness to participate in sporting opportunities
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	<u>Big Question 4:</u> Can you apply the components of fitness to a skilled performance?	each fitness component 1.3.1 Devising skill based fitness tests 1.3.2 Conduct the tests devised 1.3.3 How to record results of skill based fitness tests 1.3 Application of components of fitness to skill performance	planning and delivery of a fitness training programme.		Homework is set on TheEverLearner platform where teachers can monitor student knowledge and progress. It is recommended that students do 30 minutes of homework for every hour they spend in class.	- Bioelectrical Impedance Analysis machine, heart rate monitor - Rating of Perceived Exertion Scale - Published normative data tables for interpretation of fitness test results. - Resources for reviewing performance, such as recording equipment.	that will help to develop positive attitudes towards different religious, ethnic and socio-economic groups in the local, national and global communities. Students are taught that the only way you can achieve in sport to a high standard is if you work hard and if you can discipline yourself to train and apply yourself.
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Topic Area 2 – Principles of training in sport

	<u>Big Question 5:</u> What are the principles of training?	2.1.1 The definition and application of each principle of training and goal setting	By completing this unit, students will conduct a range of fitness tests, understand what they test and their	- SPOR - Specificity - Progression - Overload - Reversibility - FITT	This is a mandatory, non-examined assessed (NEA) unit. Students will be entered for assessed in June of Year 10.	- ICT Classroom - PowerPoint - Knowledge Organiser	Students develop a sense of enjoyment and fascination in
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	<u>Big Question 6:</u> - What are SMART goals? <u>Big Question 7:</u> - What are methods of training and their advantages/disadvantages?	2.1.1 The definition and application of each principle of training and goal setting 2.2.1 Advantages and disadvantages of the structure of each training method 2.2.2 Aerobic exercise 2.2.3 Anaerobic exercise	advantages and disadvantages. Students will also learn how to design, plan and evaluate a fitness training programme. They will then interpret the data collected from these fitness tests and learn how best to feed this back. <u>Topics include:</u> - Components of fitness applied in sport - Principles of training in sport - Organising and planning a fitness training programme - Evaluate own performance in planning and delivery of a fitness training programme.	- SMART - Continuous training - Aerobic training zone - Fartlek training - Interval training - Work-to-rest ratio - Circuit training - Plyometric training - Eccentric contraction - Concentric contraction - Resistance training - Repetition - Hypertrophy - High-intensity interval training (HIIT)	Assessment is via an OCR-set assignment, which is marked by teachers and moderated by OCR examiners. The unit is assessed through five practical tasks, each of which needs to be evidenced. It is out of 80 marks in total and is worth 40% of the overall grade. In Year 9, students will complete Week 3 termly assessments and end of topic tests (EOTTs). Homework is set on TheEverLearner platform where teachers can monitor student knowledge and progress. It is recommended that students do 30 minutes of homework for every hour they spend in class.	- EverLearner platform - Student textbooks - Access to Sports Hall (for multistage fitness test and training methods) - Access to free weights. - Fitness testing equipment: sit and reach box, grip dynamometer, benches for step test, stop watches, metronome, vertical jump board, skinfold callipers. - Bioelectrical Impedance Analysis machine, heart rate monitor - Rating of Perceived Exertion Scale	learning about themselves, others and the sporting world around them. Students are encouraged to use their imagination and creativity in their learning, and showcase a willingness to reflect on their own and others sporting experiences. This course encourages a willingness to participate in sporting opportunities that will help to develop positive attitudes towards different religious, ethnic and socio-economic groups in the
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						- Published normative data tables for interpretation of fitness test results. - Resources for reviewing performance, such as recording equipment.	local, national and global communities. Students are taught that the only way you can achieve in sport to a high standard is if you work hard and if you can discipline yourself to train and apply yourself.
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Topic Area 3 – Organising and planning a fitness training programme

<u>Big Question 8:</u> - What factors should you consider when designing a fitness training programme? <u>Big Question 9:</u> - How do you apply the principles of training to a fitness training programme?	3.1.1 Considerations to inform planning 3.1.2 Applying principles of training	By completing this unit, students will conduct a range of fitness tests, understand what they test and their advantages and disadvantages. Students will also learn how to design, plan and evaluate a fitness training programme. They will then interpret the data collected from these fitness tests and	- One rep max - Adaptability - Objective measures	This is a mandatory, non-examined assessed (NEA) unit. Students will be entered for assessed in June of Year 10. Assessment is via an OCR-set assignment, which is marked by teachers and moderated by OCR examiners. The unit is assessed through five practical	- ICT Classroom - PowerPoint - Knowledge Organiser - EverLearner platform - Student textbooks - Access to Sports Hall (for multistage fitness test and training methods)	Students develop a sense of enjoyment and fascination in learning about themselves, others and the sporting world around them. Students are encouraged to use their imagination and creativity
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	<u>Big Question 10:</u> - How do you plan a fitness training programme? <u>Big Question 11:</u> - How do you record your results from a fitness training programme?	3.2.1 Elements of training programmes 3.2.2 How to monitor progress and adapt a programme 3.3 Recording results from fitness training programme 3.3.1 Post programme tests 3.3.2 Achievement recognised	learn how best to feed this back. <u>Topics include:</u> - Components of fitness applied in sport - Principles of training in sport - Organising and planning a fitness training programme - Evaluate own performance in planning and delivery of a fitness training programme.		tasks, each of which needs to be evidenced. It is out of 80 marks in total and is worth 40% of the overall grade. In Year 9, students will complete Week 3 termly assessments and end of topic tests (EOTTs). Homework is set on TheEverLearner platform where teachers can monitor student knowledge and progress. It is recommended that students do 30 minutes of homework for every hour they spend in class.	- Access to free weights. - Fitness testing equipment: sit and reach box, grip dynamometer, benches for step test, stop watches, metronome, vertical jump board, skinfold callipers. - Bioelectrical Impedance Analysis machine, heart rate monitor - Rating of Perceived Exertion Scale - Published normative data tables for interpretation of fitness test results. - Resources for reviewing performance, such as	in their learning, and showcase a willingness to reflect on their own and others sporting experiences. This course encourages a willingness to participate in sporting opportunities that will help to develop positive attitudes towards different religious, ethnic and socio-economic groups in the local, national and global communities. Students are taught that the only way you can achieve in sport to a high standard is if
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						recording equipment.	you work hard and if you can discipline yourself to train and apply yourself.
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Topic Area 4 – Evaluate own performance in planning and delivery of a fitness training programme

<u>Big Question 12:</u> What are the strengths and areas for improvement for your fitness training programme?	4.1 Effectiveness of a fitness training programme	By completing this unit, students will conduct a range of fitness tests, understand what they test and their advantages and disadvantages. Students will also learn how to design, plan and evaluate a fitness training programme. They will then interpret the data collected from these fitness tests and learn how best to feed this back. <u>Topics include:</u> - Components of fitness applied in sport - Principles of training in sport		This is a mandatory, non-examined assessed (NEA) unit. Students will be entered for assessed in June of Year 10. Assessment is via an OCR-set assignment, which is marked by teachers and moderated by OCR examiners. The unit is assessed through five practical tasks, each of which needs to be evidenced. It is out of 80 marks in total and is worth 40% of the overall grade. In Year 9, students will complete Week 3 termly assessments	- ICT Classroom - PowerPoint - Knowledge Organiser - EverLearner platform - Student textbooks - Access to Sports Hall (for multistage fitness test and training methods) - Access to free weights. - Fitness testing equipment: sit and reach box, grip dynamometer, benches for step test, stop watches,	Students develop a sense of enjoyment and fascination in learning about themselves, others and the sporting world around them. Students are encouraged to use their imagination and creativity in their learning, and showcase a willingness to reflect on their own and others sporting experiences.
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			▪ Organising and planning a fitness training programme ▪ Evaluate own performance in planning and delivery of a fitness training programme.		and end of topic tests (EOTTs). Homework is set on TheEverLearner platform where teachers can monitor student knowledge and progress. It is recommended that students do 30 minutes of homework for every hour they spend in class.	metronome, vertical jump board, skinfold callipers. ▪ Bioelectrical Impedance Analysis machine, heart rate monitor ▪ Rating of Perceived Exertion Scale ▪ Published normative data tables for interpretation of fitness test results. ▪ Resources for reviewing performance, such as recording equipment.	This course encourages a willingness to participate in sporting opportunities that will help to develop positive attitudes towards different religious, ethnic and socio-economic groups in the local, national and global communities. Students are taught that the only way you can achieve in sport to a high standard is if you work hard and if you can discipline yourself to train and apply yourself.
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R182: The body's response to physical activity and how technology informs this

Topic Area 1 – The cardio-respiratory system and how the use of technology supports different types of sports and their intensities

	<u>Big Question 1:</u> - What is the function and role of the cardio-respiratory system? <u>Big Question 2:</u> - How is technology used to inform us about the cardio-respiratory system?	1.1 Components, function and role of cardio-respiratory system during exercise 1.1.1 Components 1.1.2 Function and role 1.2.1 Technology that can inform how the cardio-respiratory system is responding whilst performing in sport during warm up and performance 1.2.2 Information that technology can give sports performers on their long-term participation in physical activity 1.2.3 The benefits and drawbacks of sports technology to the sports performer	By completing this unit, students will gain understanding of how both the cardio-respiratory and musculo-skeletal systems provide you with the energy and movements needed to keep you exercising and in turn how exercise helps develop both systems. Students will also learn about relevant technology and how this assists us in measuring changes in these systems. <u>Topics include:</u> The cardio-respiratory system and how the use of technology supports different types of sports and their intensities	- Chambers - Atria - Ventricles - Valves - Deoxygenated - Oxygenated - Arteries - Capillaries - Alveoli - Carbon dioxide - Veins - Trachea - Lungs - Bronchi - Bronchioles - Diaphragm - Heart rate - Radial pulse - Carotid pulse - Vasoconstriction - Vasodilation - Vascular shunt mechanism - Cardiac output - Stroke volume - Systolic blood pressure - Diastolic blood pressure - Inhalation	This is an optional, non-examined assessed (NEA) unit. Students will be entered for assessed in January of Year 11. Assessment is via an OCR-set assignment, which is marked by teachers and moderated by OCR examiners. The unit is assessed through three practical tasks, each of which needs to be evidenced. It is out of 40 marks in total and is worth 20% of the overall grade. In Year 9, students will complete Week 3 termly assessments and end of topic tests (EOTTs).	- ICT Classroom - PowerPoint - Knowledge Organiser - EverLearner platform - Student textbooks - Access to Sports Hall	Students develop a sense of enjoyment and fascination in learning about themselves, others and the sporting world around them. Students are encouraged to use their imagination and creativity in their learning, and showcase a willingness to reflect on their own and others sporting experiences. This course encourages a willingness to participate in sporting opportunities
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			▪ The musculo-skeletal system and how the use of technology supports different types of sports and their movements ▪ Short-term effects of exercise on the cardio-respiratory and musculo-skeletal systems ▪ Long-term effects of exercise on the cardio-respiratory and musculo-skeletal systems.	▪ Exhalation ▪ Intercostal muscles ▪ Internal respiration ▪ Diffusion ▪ Technology ▪ Wearable technology ▪ Laboratory-based technology ▪ Field-based technology ▪ Sphygmomanometer ▪ Spirometry traces ▪ Spirometer ▪ Vital capacity ▪ Pulse oximeter	Homework is set on TheEverLearner platform where teachers can monitor student knowledge and progress. It is recommended that students do 30 minutes of homework for every hour they spend in class.		that will help to develop positive attitudes towards different religious, ethnic and socio-economic groups in the local, national and global communities. Students are taught that the only way you can achieve in sport to a high standard is if you work hard and if you can discipline yourself to train and apply yourself.
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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

<u>Big Question 3:</u> ▪ What are the components and role of the musculo-skeletal system?	▪ 2.1 The components and role of the musculo-skeletal system in producing movement	By completing this unit, students will gain understanding of how both the cardio-respiratory and musculo-skeletal	▪ Ribcage ▪ Clavicle ▪ Scapula ▪ Humerus ▪ Radius ▪ Ulna	This is an optional, non-examined assessed (NEA) unit. Students will be entered for assessed in January of Year 11.	▪ ICT Classroom ▪ PowerPoint ▪ Knowledge Organiser	Students develop a sense of enjoyment and fascination in
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	<u>Big Question 4:</u> How is technology used to inform us about the musculo-skeletal system?	2.1.2 The role of the components in producing the types of movement 2.2.1 Technology that can inform how the musculo-skeletal system is responding to short- and long-term participation in physical activity 2.2.2 The benefits and drawbacks of this technology to the sports performer	systems provide you with the energy and movements needed to keep you exercising and in turn how exercise helps develop both systems. Students will also learn about relevant technology and how this assists us in measuring changes in these systems. <u>Topics include:</u> - The cardio-respiratory system and how the use of technology supports different types of sports and their intensities - The musculo-skeletal system and how the use of technology supports different types of sports and their movements - Short-term effects of exercise on the cardio-respiratory and musculo-skeletal systems	- Cranium - Ribs - Sternum - Vertebrae - Femur - Tibia - Fibula - Patella - Deltoids - Trapezius - Latissimus dorsi - Pectorals - Biceps - Triceps - Abdominals - Gluteals - Hamstrings - Quadriceps - Gastrocnemius - Soleus - Synovial joint - Hinge joint - Gliding joint - Pivot joint - Connective tissue - Cartilage - Tendons - Flexion - Extension - Abduction - Adduction - Rotation - Circumduction - Electromyography (EMG)	Assessment is via an OCR-set assignment, which is marked by teachers and moderated by OCR examiners. The unit is assessed through three practical tasks, each of which needs to be evidenced. It is out of 40 marks in total and is worth 20% of the overall grade. In Year 9, students will complete Week 3 termly assessments and end of topic tests (EOTTs). Homework is set on TheEverLearner platform where teachers can monitor student knowledge and progress. It is recommended that students do 30 minutes of homework for every hour they spend in class.	- EverLearner platform - Student textbooks - Access to Sports Hall	learning about themselves, others and the sporting world around them. Students are encouraged to use their imagination and creativity in their learning, and showcase a willingness to reflect on their own and others sporting experiences. This course encourages a willingness to participate in sporting opportunities that will help to develop positive attitudes towards different religious, ethnic and socio-economic groups in the
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			Long-term effects of exercise on the cardio-respiratory and musculo-skeletal systems.				local, national and global communities. Students are taught that the only way you can achieve in sport to a high standard is if you work hard and if you can discipline yourself to train and apply yourself.
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Topic Area 3 – Short-term effects of exercise on the cardio-respiratory and musculo-skeletal systems

<u>Big Question 5:</u> - What are the short-term effects of exercise on the cardio-respiratory system? <u>Big Question 6:</u> - What are the short-term effects of exercise on the	3.1 The different 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	By completing this unit, students will gain understanding of how both the cardio-respiratory and musculo-skeletal systems provide you with the energy and movements needed to keep you exercising and in turn how exercise helps develop both systems. Students will also learn about relevant	- Anticipatory rise - ROM	This is an optional, non-examined assessed (NEA) unit. Students will be entered for assessed in January of Year 11. Assessment is via an OCR-set assignment, which is marked by teachers and moderated by OCR examiners. The unit is assessed through three	- ICT Classroom - PowerPoint - Knowledge Organiser - EverLearner platform - Student textbooks - Access to Sports Hall	Students develop a sense of enjoyment and fascination in learning about themselves, others and the sporting world around them. Students are encouraged to use their imagination and creativity
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	musculo-skeletal system?		technology and how this assists us in measuring changes in these systems. <u>Topics include:</u> ▪ The cardio-respiratory system and how the use of technology supports different types of sports and their intensities ▪ The musculo-skeletal system and how the use of technology supports different types of sports and their movements ▪ Short-term effects of exercise on the cardio-respiratory and musculo-skeletal systems ▪ Long-term effects of exercise on the cardio-respiratory and musculo-skeletal systems.		practical tasks, each of which needs to be evidenced. It is out of 40 marks in total and is worth 20% of the overall grade. In Year 9, students will complete Week 3 termly assessments and end of topic tests (EOTTs). Homework is set on TheEverLearner platform where teachers can monitor student knowledge and progress. It is recommended that students do 30 minutes of homework for every hour they spend in class.	in their learning, and showcase a willingness to reflect on their own and others sporting experiences. This course encourages a willingness to participate in sporting opportunities that will help to develop positive attitudes towards different religious, ethnic and socio-economic groups in the local, national and global communities. Students are taught that the only way you can achieve in sport to a high standard is if
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							you work hard and if you can discipline yourself to train and apply yourself.
Topic Area 4 – Long-term effects of exercise on the cardio-respiratory and musculo-skeletal systems							
<u>Big Question 7:</u> - What are the long-term effects of exercise on the cardio-respiratory system? <u>Big Question 8:</u> - What are the long-term effects of exercise on the musculo-skeletal system?	4.1 The 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	By completing this unit, students will gain understanding of how both the cardio-respiratory and musculo-skeletal systems provide you with the energy and movements needed to keep you exercising and in turn how exercise helps develop both systems. Students will also learn about relevant technology and how this assists us in measuring changes in these systems. <u>Topics include:</u> The cardio-respiratory system and how the use of technology	- Fast twitch fibres - Slow twitch fibres - Bradycardia - Goniometer - Lung capacity - Tidal volume - Bone density - Capillarisation - Heart disease - Heart attack	This is an optional, non-examined assessed (NEA) unit. Students will be entered for assessed in January of Year 11. Assessment is via an OCR-set assignment, which is marked by teachers and moderated by OCR examiners. The unit is assessed through three practical tasks, each of which needs to be evidenced. It is out of 40 marks in total and is worth 20% of the overall grade. In Year 9, students will complete Week 3 termly assessments	- ICT Classroom - PowerPoint - Knowledge Organiser - EverLearner platform - Student textbooks - Access to Sports Hall	Students develop a sense of enjoyment and fascination in learning about themselves, others and the sporting world around them. Students are encouraged to use their imagination and creativity in their learning, and showcase a willingness to reflect on their own and others sporting experiences.	

			supports different types of sports and their intensities ▪ The musculo-skeletal system and how the use of technology supports different types of sports and their movements ▪ Short-term effects of exercise on the cardio-respiratory and musculo-skeletal systems ▪ Long-term effects of exercise on the cardio-respiratory and musculo-skeletal systems.		and end of topic tests (EOTTs). Homework is set on TheEverLearner platform where teachers can monitor student knowledge and progress. It is recommended that students do 30 minutes of homework for every hour they spend in class.		This course encourages a willingness to participate in sporting opportunities that will help to develop positive attitudes towards different religious, ethnic and socio-economic groups in the local, national and global communities. Students are taught that the only way you can achieve in sport to a high standard is if you work hard and if you can discipline yourself to train and apply yourself.
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