PE Department - Year 10: Cambridge National Sports Science Course

Shirley High Curriculum Map

The aim of the first year of the Cambridge Sports Science course is to introduce students to one of the mandatory units (R042) in order to secure key knowledge and understanding required and to make clear synoptic links with other units studied later on in the year. The body's responses to physical activity (R043) will follow the mandatory unit as students will have previously covered some of this content in core PE lessons and in Science classes. The first content of Sports Psychology will also be taught at the end of the year to support year 11 coursework.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Theme/Topic/Skill:	Theme/Topic/Skill:	Theme/Topic/Skill:	Theme/Topic/Skill:	Theme/Topic/Skill:	Theme/Topic/Skill:
	RO42 – Applying the Principles of training	**RO42 – Applying the Principles of training**	**RO42 – Applying the principles of training** **RO43 – The body's responses to physical activity**	**RO43 – The body's responses to physical activity**	**RO43 – The body's responses to physical activity**	**RO44 – Sports Psychology**
Why now?	This is one of the mandatory units where students will make critical synoptic links with all other units studied. Students will need to synthesize the knowledge, skills and understanding they develop in the mandatory units, in order to apply them to relevant contexts when they complete the assessment for the optional units.			In this unit students' draw on fundamental knowledge, skills and understanding from RO42 in order to measure and record data safely and accurately.		
Fundamental Concepts	Principles and methods of training and how they target different fitness components	Fitness testing and training programmes	Evaluate training programme Musculo-skeletal and Cardio-respiratory systems functions and roles	Musculo-skeletal and Cardio-respiratory systems in health and fitness	Long and short term effects of exercise	Personality and sports performance
Students will…	- Develop key knowledge and understanding of the principles of training in a sporting context. - They will be able to define aerobic and anaerobic respiration and relate these to a variety of sporting examples. - Know all methods of training (aerobically and anaerobically). - Define all components of fitness, linking them to specific training methods.	-Develop key knowledge and understanding of specific tests which assess fitness components -Know how to interpret the results of fitness tests - Design and perform their own fitness training programme over a six week period.	RO42: - Be able to evaluate the effectiveness of their own training programme in relation to principles of training. RO43: - Know the key components of the musculo-skeletal system and its function. - Know the key components of cardio-respiratory system and its function - Know the role of the musculo-skeletal system in producing movement.	- Know the role of the cardio-respiratory system during physical activity - Understand the benefits of cardio-respiratory fitness in everyday life and sport - Understand the benefits of muscular strength, flexibility and muscular endurance in everyday life and sport.	-Know the different short-term effects of physical activity on the musculo-skeletal and cardio-respiratory systems and reasons for these. -Be able to measure and record the short-term effects of physical activity on the musculo-skeletal and cardiorespiratory systems - Know the long-term effects of physical activity on the musculo-skeletal and cardio-respiratory systems and reasons for these. - Be able to measure and record the long-term effects of physical activity on the musculo-skeletal and cardiorespiratory systems.	- Develop a knowledge of the definitions of personality - Be able to know the difference between extrovert and introvert personality types - Know the links between personality and involvement in sport - develop a knowledge and understanding of the observed/ social learning theory and trait theory.
Language for Life (Key terms/Vocabulary)	- Principles of training; progression; overload; specificity; reversibility; moderation; variance - Respiration; aerobic; anaerobic. -Components of fitness; stamina; strength; flexibility; balance; agility; cardiovascular endurance; muscular endurance; power; continuous; interval; fartlek -Methods of training; resistance; circuit; plyometric; static; dynamic stretching	- Fitness testing; validity; reliability; maximal; sub maximal testing; normative data; protocol; - Designing a fitness training programme; PAR-Q; lifestyle questionnaire; client; progress review; overtraining; work-rest ratio; adaptability	- Components of the musculo-skeletal system; cranium; sternum; vertebrae; clavicle; scapula; humerus; radius; ulna; carpals; meta-carpals; pelvic girdle; tibia; fibula; patella; tarsals; meta-tarsals; deltoids; trapezius; latissimus dorsi; pectorals; gluteals; hamstrings; gastrocnemius; soleus - Function of the musculo-skeletal system; synovial joint; pivot; condyloid; saddle; gliding; ball and socket; hinge; cartilage; atria; ventricles; valves; trachea; alveoli; diaphragm; plasma; platelets; arteries; veins; capillaries -Types of movement; flexion; extension; abduction; adduction; rotation; circumduction -Types of muscular contraction; isotonic; isometric;	- The role of the cardio-respiratory system during physical activity; cardiac output; stroke volume; blood pressure; vascular shunt - The benefits of cardio-respiratory fitness; heart disease; obesity; stroke; stress; osteoporosis;	- Short term effects; heart rate; stroke volume; cardiac output; anticipatory rise; muscle fatigue; - Be able to measure; objective data; subjective; data; bradycardia; hypertrophy; lung capacity; tidal volume; vital capacity - Long term effects; muscle size; strength; recovery rate; muscle recovery; lung capacity; lung volume; adaptations	- Personality types; extrovert; introvert; traits - Theories of personality; Trait Theory; Social Learning Theory; - Links between personality and involvement; social media;
Extended writing Opportunities	Centre-assessed tasks	Centre-assessed task	Centre-assessed tasks	Centre-assessed tasks	Centre-assessed tasks	Centre-assessed tasks
Maths Across the Curriculum	Heart rate calculations; training zones	Heart rate calculations; training zones; recording of data; normative Data;	Forces; weight	Statistics for different countries obesity levels; recommended daily exercise	Recording heart rate and recovery rate; breathing rate; temperature measurements; tidal volume; flexibility data	SCAT and STAI scores
Links to careers/ aspirations	Personal trainer		Exercise physiologist			Sports Psychologist
Cultural Capital Extra-curricular and trips	Speaker from local leisure centre about personal training	Visit local army base to see fitness testing for public services				
Practical Application of Skills	Carry out training methods; fitness testing; training programme	Training methods; fitness testing ; training programme	Demonstrate types of movements: use practical sporting examples i.e. flexion/extension bicep curl; muscular contractions demonstrations	Carry out suitable activities to measure short and long term effects e.g. shuttle runs; step-ups etc. Spirometry; Goniometer	Carry out suitable activities to measure short and long term effects e.g. shuttle runs; press –ups etc. Spirometry; Goniometer	Students to take part in activities and decide if linked to more introvert or extrovert personality types; observation of a variety of sporting athletes