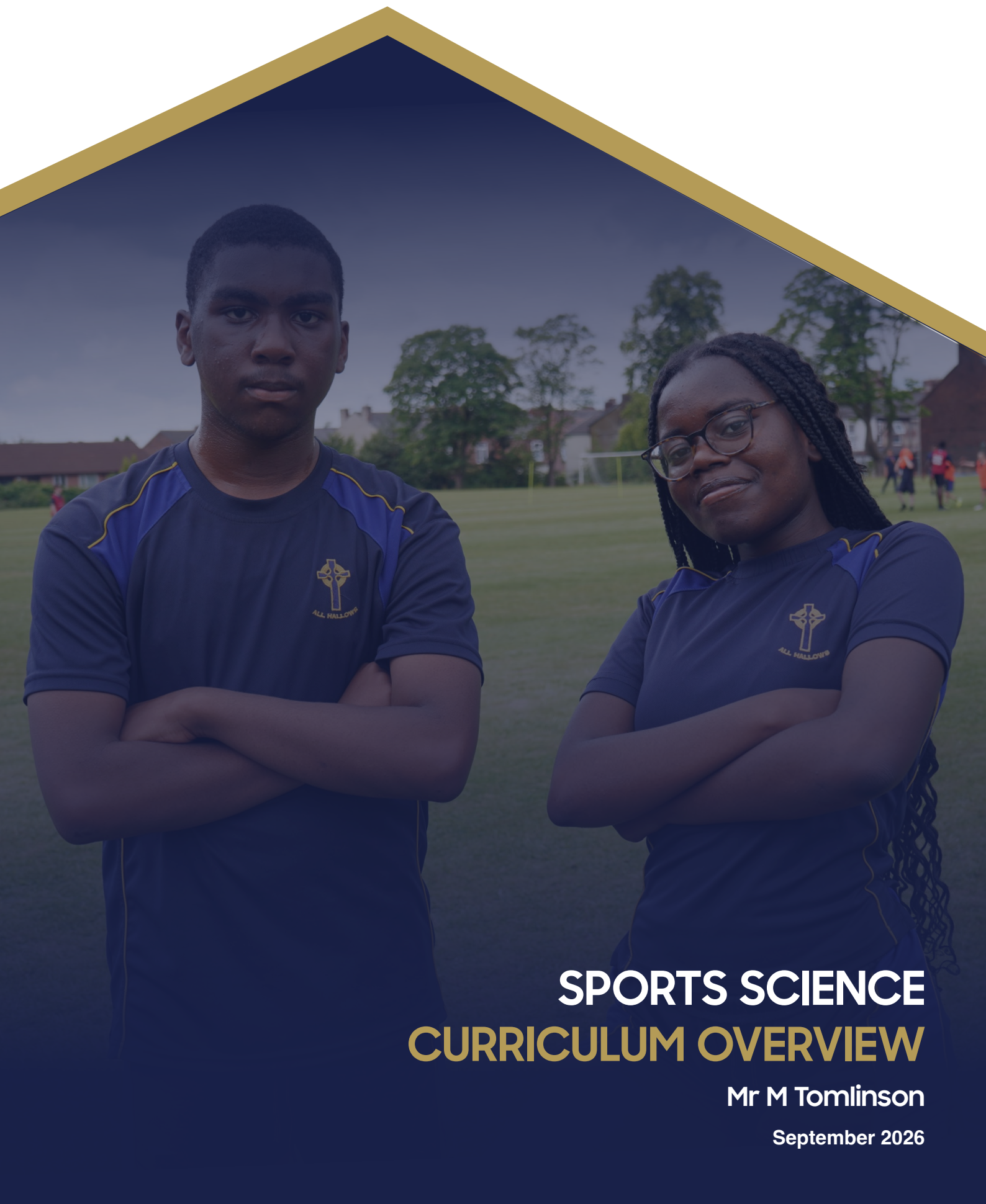


All Hallows RC High School

Believe. Belong. Achieve.



SPORTS SCIENCE CURRICULUM OVERVIEW

Mr M Tomlinson

September 2026



Mission Statement

Believe. Belong. Achieve.

At All Hallows RC High School, we are a Christ-centred community committed to living out the Gospel values in every aspect of our school life. Our school mission is to inspire, support and challenge every member of our school. We **believe** that every person is created in the image of God and that they grow in faith guided by the teachings of Christ. We strive to foster an environment where love, peace, courage, justice and kindness guide our actions so we develop into compassionate, resilient individuals who contribute positively to the world around them.

We are a community built on love, demonstrating unconditional respect and kindness for all. By fostering strong relationships, we ensure that every individual feels that they **belong**, are valued, supported and accepted as part of our family. We celebrate our differences and each person's uniqueness. We encourage forgiveness and understanding to create an environment where every pupil can flourish in their own way.

Through these values, All Hallows RC High School nurtures the whole person spiritually, academically and socially so they can **achieve**. We are a school where the Gospel values are not just ideals but the foundation of everything we do. With Christ at the centre, we enrich the lives of our pupils and guide them on the path of faith, purpose and integrity.

Curriculum Intent

All children will experience a well-balanced and comprehensive curriculum that enhances informed, intellectual, developmental and moral character. As a result, this will improve life chances, interpersonal relationships, social mobility and preparedness for employment. Our curriculum will encourage everyone to have a positive impact on society.

By following the OCR Sports Science course learners will develop different types of skills through largely practical means; communication, problem solving, team working, evaluation and analysis, performing under pressure, and formulating written findings from practical investigation. These are all transferable skills which can be learned and assessed through the qualification and utilised in many other educational and employment settings. Students will appreciate that elite sport has embraced sport science disciplines wholeheartedly in the past few decades, moving from a perspective which assumed the primacy of natural talent in producing outstanding performance, to one which considers every minute detail of an athlete's training programme, rest time, environment and psychology in the pursuit of excellence.

The Cambridge Nationals in Sport Science offer learners the opportunity to study key areas of sport science including anatomy and physiology linked to fitness, health, injury and performance; the science of training and application of training principles, and psychology in sport and sports performance.

Sport is a key theme in most areas of both education and health policy. The need for people to lead healthy and active rather than sedentary lifestyles is increasingly prominent in respect of government initiatives, and this is reflected in the school curriculum, where physical education and sport remains core; these qualifications seek to build upon this provision at key stages 3 and 4.

Our Aims

Taking part in sport and physical activity puts the body under stress. Knowing how to reduce the risk of injury when taking part in sport, and how to respond to injuries and medical conditions in a sport setting are, therefore, vital skills in many roles within the sport and leisure industry, whether you are a lifeguard, a steward at a sports stadium or a personal fitness instructor.

By completing this unit, learners will know how to prepare participants to take part in physical activity in a way which minimises the risk of injuries occurring, how to react to common injuries that can occur during sport and how to recognise the symptoms of some common medical conditions, providing a good foundation to undertake formal first aid training and qualifications.

Attainment Targets - What we want them to accomplish

- Both qualifications have been designed with practical and engaging ways of teaching in mind and enable learners to:
- develop a range of skills through involvement in sport and physical activity in different contexts and roles
- develop their ability to apply theoretical knowledge to practical situations
- gain a better understanding of the complexity of different areas of sport and the sports industry
- increase their awareness of different ways to stay involved in sport and physical activity and of different careers and roles within sport.

Catholic Social Teaching (CST) in Sports Science:

Catholic Social Teaching (CST) is embedded within our theoretical Cambridge National Sport Science curriculum, moving beyond practical play to deep academic evaluation. The core principle of **human dignity** is explored through **Unit R180 (Reducing the Risk of Sports Injuries)**, where students study how intrinsic and extrinsic factors, correct warm-ups, and equipment choices preserve the physical well-being of the human body. By prioritising safety and learning how to correctly respond to common medical conditions, students are taught to treat the health and safety of every participant with genuine care and respect.

Opportunities for **solidarity and stewardship** are directly woven into **Unit R181 (Applying the Principles of Training)**. As students learn to conduct fitness tests, interpret data, and design bespoke training programmes, they take on the responsibility of guiding others. This stewardship encourages empathy as they customise regimens to an athletes unique fitness levels and skill needs, recognising how interdependent a coach and performer are when working toward a goal.

Furthermore, when focusing on **The Common Good**, students in **Unit R183 (Nutrition and Sports Performance)** look at how dietary requirements vary across different populations and sporting activities. They evaluate how access to a healthy, balanced nutrition plan impacts an individual's performance and lifestyle. By understanding these principles, students don't just learn the science of diet and training; they explore how to manage nutritional and physical behaviours to promote equal opportunities for health, equity, and peak performance for all members of society.

KS4 Order of Teaching 2026

Year	Term 1
10	R181 - Applying the Principles of Training.
11	R183 - Nutrition and Sports Performance.

Year	Term 2
10	R181 - Applying the Principles of Training.
11	R183 - Nutrition and Sports Performance.

Year	Term 3
10	R183 - Nutrition and Sports Performance.
11	R180 - Reducing the Risk of Sports Injuries.

Unit R180: Reducing the Risk of Sports Injuries & Dealing with Medical Conditions (Core/Examined)

Below is the key terminology categorised by core topic areas as assessed in the specification.

Factors Influencing Injury Risk

- Extrinsic Factors: External risks beyond the athlete's control (e.g., equipment, environment, playing surface, coaching, opponent conduct).
- Intrinsic Factors: Internal risks related to the individual's body/mind (e.g., age, posture, flexibility, previous injury, nutrition, psychological factors).

Injury Types & Responses

- Acute Injury: An injury caused by sudden trauma/impact occurring instantly (e.g., fracture, concussion, sprain).
- Chronic Injury: An overuse injury that develops slowly over time from repetitive stress (e.g., tendonitis, shin splints).
- Soft Tissue Injury: Damage to muscles, ligaments, or tendons (e.g., strain, sprain, abrasion, contusion).
- Hard Tissue Injury: Damage to bone structure or teeth (e.g., simple/compound fractures, dislocations).
- PRICE Protocol: Immediate emergency response to soft tissue injuries: Protect, Rest, Ice, Compress, Elevate.
- SALTAPS: Acute injury assessment protocol: See, Ask, Look, Touch, Active movement, Passive movement, Strength test.

Emergency Procedures & Conditions

- EAP (Emergency Action Plan): Pre-planned procedures covering emergency personnel, communication, and equipment access.
- Hypothermia: Dangerous drop in core body temperature below 35 degrees
- Hyperthermia / Heat Stroke: Dangerous rise in core body temperature caused by extreme heat and dehydration.
- Asthma / Anaphylaxis: Specific medical conditions requiring rapid administration of inhalers (bronchodilators) or auto-injectors (adrenaline/EpiPen).

Unit R181: Applying Principles of Training, Fitness & Exercise Prescriptions

Principles of Training

- FITT Principle: The variables adjusted to plan effective training: Frequency, Intensity, Time, Type.
- SPORT Principles: Core concepts governing exercise adaptation:
- Specificity: Matching training directly to the sport/movement.
- Progress: Gradually increasing physical workload over time.
- Overload: Stressing the body beyond normal limits to force adaptation.
- Reversibility: Fitness lost when training stops or decreases ("use it or lose it").
- Tedium: Adding variety to prevent boredom and mental burnout.

Components of Physical & Skill Fitness

- Cardiovascular Endurance: Capacity of the heart and lungs to supply oxygen to working muscles over long periods.
- Muscular Endurance: Ability of muscles to contract repeatedly against resistance without fatiguing.
- Power: Explosive exertion combining strength and
- Reaction Time: Time elapsed between a sensory stimulus and the initial physical response.

Training Methods & Testing

- Continuous Training: Sub-maximal, steady-rate exercise without rest periods (aerobic system development).
- Interval / HIIT: High-intensity exercise interspersed with active/passive recovery intervals.
- Fartlek Training: Variable-pace continuous exercise over changing terrain ("speed play").
- Plyometrics: High-impact exercises (e.g., depth jumps) designed to build explosive muscle power.
- Validity & Reliability: Ensuring a fitness test accurately measures what it claims to measure (validity) and produces consistent results when repeated (reliability).

Unit R183: Sports Nutrition & Performance

Nutrients & Functions

- Macronutrients: Nutrients required in large daily quantities:
- Carbohydrates: Primary fuel source for energy; stored as glycogen in liver and skeletal muscle.
- Proteins: Essential for muscle growth, tissue repair, and enzyme production.
- Fats: Secondary energy source for low-intensity aerobic activity and cell insulation.
- Micronutrients: Essential trace compounds needed in smaller quantities:
- Vitamins: Organic compounds supporting immune function and energy production (e.g., Vitamin C, Vitamin D).
- Minerals: Inorganic compounds crucial for physiological processes (e.g., Iron for haemoglobin/oxygen transport, Calcium for bone density).



Energy Balance & Hydration

- Energy Balance: The relationship between energy consumed via food (calories in) versus energy expended via basal metabolic rate and exercise (calories out).
- Hydration / Dehydration: Water level regulation in body tissues; dehydration causes blood thickening, reduced stroke volume, and impaired thermoregulation.
- Carbo-Loading: Nutritional strategy of maximizing muscle glycogen stores prior to endurance events.



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