

Co-teaching AS and A-level Physical Education: theoretical content

This resource sets out the theoretical content you need to cover when co-teaching AS and A-level PE. The left-hand columns show the content that needs to be covered for both AS and A-level (year 1), and the right hand columns show any additional content you need to cover when teaching A-level only (year 2).

3.1.1 Applied anatomy and physiology

3.1.1.1 Cardio-respiratory system

3.1.1.2 Cardiovascular system

AS and A-level content	A-level content only
Understanding of the impact of physical activity and sport on the health and fitness of the individual.	
The hormonal, neural and chemical regulation of responses during physical activity and sport.	
Receptors involved in regulation of responses during physical activity.	
Transportation of oxygen.	
Venous return.	
Starling's law of the heart.	
Cardiovascular drift.	
Arterio-venous oxygen difference (A-VO ₂ diff).	

3.1.1.3 Respiratory system

AS and A-level content	A-level content only
Understanding of lung volumes and the impact of and on physical activity and sport.	
Gas exchange systems at alveoli and muscles.	
The hormonal, neural and chemical regulation of pulmonary ventilation during physical activity and sport.	
Receptors involved in regulation of pulmonary ventilation during physical activity.	
Impact of poor lifestyle choices on the respiratory system.	

3.1.1.4 Neuromuscular system

AS and A-level content	A-level content only
Characteristics and functions of different muscle fibre types for a variety of sporting activities.	
Nervous system.	
Role of proprioceptors in PNF.	
The recruitment of muscle fibres.	

3.1.1.5 The musculo-skeletal system and analysis of movement in physical activities

AS and A-level content	A-level content only
Joint actions in the sagittal plane/transverse axis.	
Joint actions in the frontal plane/sagittal axis.	

Joint actions in the transverse plane/longitudinal axis.	
Types of joint, articulating bones, main agonists and antagonists, types of muscle contraction.	

3.1.1.6 Energy systems

AS and A-level content	A-level content only
	Energy transfer in the body.
	Energy continuum of physical activity.
	Energy transfer during short duration/high intensity exercise.
	Energy transfer during long duration/lower intensity exercise.
	Factors affecting VO ₂ max/aerobic power.
	Measurements of energy expenditure.
	Impact of specialist training methods on energy systems.

3.1.2 Skill acquisition

3.1.2.1 Skill, skill continuums and transfer of skills

AS and A-level content	A-level content only
Characteristics of skill.	
Use of skill continua.	
Justification of skill placement on each of the continua.	
Transfer of learning.	

Understanding of how transfer of learning impacts on skill development.	
---	--

3.1.2.2 Impact of skill classification on structure of practice for learning

AS and A-level content	A-level content only
Methods of presenting practice.	
Types of practice.	
Understanding how knowledge of skill classification informs practice structure (presentation and type) to allow learning/development of skills.	

3.1.2.3 Principles and theories of learning and performance

AS and A-level content	A-level content only
Stages of learning and how feedback differs between the different stages of learning.	
Learning plateaux.	
Cognitive theories.	
Behaviourism.	
Social learning.	
Constructivism.	
Understanding of how theories of learning impact on skill development.	

3.1.2.4 Use of guidance and feedback

AS and A-level content	A-level content only
Methods of guidance.	
Understand the different purposes and types of feedback.	

Understanding of how feedback and guidance impacts on skill development.	
--	--

3.1.2.5 Memory models

3.1.2.5.1 General information processing model

AS and A-level content	A-level content only
	Input.
	Decision making.
	Output.
	Feedback.

3.1.2.5.2 Efficiency of information processing

AS and A-level content	A-level content only
	Application of Whiting's information processing model to a range of sporting contexts.
	Applied understanding of information processing terms within a sporting context.
	Definitions of and the relationship between reaction time, response time, movement time.
	Factors affecting response time.
	Definitions of anticipation.
	Strategies to improve response time.
	Schmidt's schema theory.
	Application of schema theory in sporting situations.
	Strategies to improve information processing.

3.1.3 Sport and society

3.1.3.1 Emergence of globalisation of sport in the 21st century

3.1.3.1.1 Pre-industrial (pre-1780)

AS and A-level content	A-level content only
Characteristics and impact on sporting recreation.	
Characteristics of popular and rational recreation linked to the two-tier class system.	

3.1.3.1.2 Industrial and post-industrial (1780-1900)

AS and A-level content	A-level content only
Characteristics and impact on sport (limited to development of association football, lawn tennis and rationalisation of track and field events).	

3.1.3.1.3 Post World War II (1950 to present)

AS and A-level content	A-level content only
Characteristics and impact on sport (limited to development of association football, tennis and athletics).	

3.1.3.2 The impact of sport on society and of society on sport

3.1.3.2.1 Sociological theory applied to equal opportunities

AS and A-level content	A-level content only
Understanding of the definitions of the following. Key terms in relation to the study of sport and their impact on equal opportunities in sport and society:	

<ul style="list-style-type: none"> • society • socialisation • social processes • social issues • social structures/stratification. 	
Understanding social action theory in relation to social issues in physical activity and sport.	
Under-represented groups in sport.	
Understanding the terms equal opportunities, discrimination, stereotyping and prejudice.	
The barriers to participation in sport and physical activity and possible solutions to overcome them for under-represented groups in sport.	
The benefits of raising participation.	
The interrelationship between Sport England, local and national partners to increase participation at grass roots level and under-represented groups in sport.	

3.2.1 Exercise physiology

3.2.1.1 Diet and nutrition and their effect on physical activity and performance

AS and A-level content	A-level content only
Understand the exercise-related function of food classes.	
Positive and negative effects of dietary supplements/manipulation on the performer.	

3.2.1.2 Preparation and training methods in relation to maintaining physical activity and performance

AS and A-level content	A-level content only
Understanding key data terms for laboratory conditions and field tests.	
Physiological effects and benefits of a warm-up and cool down.	
Principles of training.	
Application of principles of periodisation.	
Training methods to improve physical fitness.	

3.2.1.3 Injury prevention and the rehabilitation of injury

AS and A-level content	A-level content only
	Types of injury.
	Understanding different methods used in injury prevention, rehabilitation and recovery.
	Physiological reasons for methods used in injury rehabilitation.
	Importance of sleep and nutrition for improved recovery.

3.2.2 Biomechanical movement

3.2.2.1 Biomechanical principles

AS and A-level content	A-level content only
Newton's Three Laws of linear motion applied to sporting movements.	
Definitions, equations and units of	

example scalars.	
Centre of mass.	
Factors affecting stability.	

3.2.2.2 Levers

AS and A-level content	A-level content only
Three classes of lever and examples of their use in the body during physical activity and sport.	
Mechanical advantage and mechanical disadvantage of each class of lever.	

3.2.2.3 Linear motion

AS and A-level content	A-level content only
	An understanding of the forces acting on a performer during linear motion.
	Definitions, equations and units of vectors and scalars.
	The relationship between impulse and increasing and decreasing momentum in sprinting through the interpretation of force/time graphs.

3.2.2.4 Angular motion

AS and A-level content	A-level content only
	Application of Newton's laws to angular motion.
	Definitions and units for angular motion.
	Conservation of angular momentum during flight, moment of inertia and its relationship with angular velocity.

3.2.2.5 Projectile motion

AS and A-level content	A-level content only
	Factors affecting horizontal displacement of projectiles.
	Factors affecting flight paths of different projectiles.
	Vector components of parabolic flight.

3.2.2.6 Fluid mechanics

AS and A-level content	A-level content only
	Dynamic fluid force.
	Factors that reduce and increase drag and their application to sporting situations.
	The Bernoulli principle applied to sporting situations.

3.2.3 Sport psychology

3.2.3.1 Psychological factors that can influence an individual in physical activities

3.2.3.1.1 Aspects of personality

AS and A-level content	A-level content only
Understanding of the nature vs nurture debate in the development of personality.	
Interactionist perspective.	
How knowledge of interactionist perspective can improve performance.	

3.2.3.1.2 Attitudes

AS and A-level content	A-level content only
Triadic model.	

3.2.3.1.3 Arousal

AS and A-level content	A-level content only
Theories of arousal.	
Practical applications of theories of arousal and their impact on performance.	
Characteristics of peak flow experience.	

3.2.3.1.4 Anxiety

AS and A-level content	A-level content only
Types of anxiety.	
Advantages and disadvantages of using observations, questionnaires and physiological measures to measure anxiety.	

3.2.3.1.5 Aggression

AS and A-level content	A-level content only
Difference between aggression and assertive behaviour.	
Theories of aggression.	
Strategies to control aggression.	

3.2.3.1.6 Motivation

AS and A-level content	A-level content only
Motivation.	

3.2.3.1.7 Achievement motivation theory

AS and A-level content	A-level content only
	Atkinson's model of achievement motivation.
	Characteristics of personality components of achievement motivation.
	Impact of situational component of achievement motivation.
	Achievement goal theory.
	Strategies to develop approach behaviours leading to improvements in performance.

3.2.3.1.8 Social facilitation

AS and A-level content	A-level content only
Social facilitation and inhibition.	
Evaluation apprehension.	
Strategies to eliminate the adverse effects of social facilitation and social inhibition.	

3.2.3.1.9 Group dynamics

AS and A-level content	A-level content only
Group formation.	
Cohesion.	
Steiner's Model of potential and actual productivity, faulty group processes.	
Ringelmann effect and social loafing.	
Strategies to improve cohesion, group productivity and overcome social loafing to enhance team performance.	

3.2.3.1.10 Importance of goal setting

AS and A-level content	A-level content only
Benefits of types of goal setting.	
Principles of effective goal setting.	

3.2.3.1.11 Attribution theory

AS and A-level content	A-level content only
	Attribution process.
	Weiner's Model and its application to sporting situations.
	Link between attribution, task persistence and motivation.
	Self-serving bias.
	Attribution retraining.
	Learned helplessness.
	Strategies to avoid learned helplessness leading to improvements in performance.

3.2.3.1.12 Self-efficacy and confidence

AS and A-level content	A-level content only
	Characteristics of self-efficacy, self-confidence and self-esteem.
	Bandura's Model of self-efficacy.
	Vealey's Model of self-confidence.
	Effects of home field advantage.
	Strategies to develop high levels of self-efficacy leading to improvements in performance.

3.2.3.1.13 Leadership

AS and A-level content	A-level content only
	Characteristics of effective leaders.
	Styles of leadership.
	Evaluation of leadership styles for different sporting situations.
	Prescribed and emergent leaders.
	Theories of leadership in different sporting situations.

3.2.3.1.14 Stress management

AS and A-level content	A-level content only
	Explanation of the terms 'stress' and 'stressor'.
	Use of warm up for stress management.
	Effects of cognitive and somatic techniques on the performer.
	Explanation of cognitive techniques.

3.2.4 Sport and society and the role of technology in physical activity and sport

3.2.4.1 Concepts of physical activity and sport

AS and A-level content	A-level content only
	The characteristics and functions of key concepts and how they create the base of the sporting development continuum.
	The similarities and the differences between these key concepts.

3.2.4.2 Development of elite performers in sport

AS and A-level content	A-level content only
	The personal, social and cultural factors required to support progression from talent identification to elite performance.
	The generic roles, purpose and the relationship between organisations in providing support and progression from talent identification through to elite performance.
	The key features of National Governing Bodies' Whole Sport Plans.
	The support services provided by National Institutes of Sports for talent development.
	The key features of UK Sport's World Class Performance Programme, Gold Event Series and Talent Identification and Development.

3.2.4.3 Ethics in sport

AS and A-level content	A-level content only
	Amateurism, the Olympic Oath, sportsmanship, gamesmanship, win ethic.
	Positive and negative forms of deviance in relation to the performer.

3.2.4.4 Violence in sport

AS and A-level content	A-level content only
	The causes and implications of violence in sport in relation to the performer, spectator and sport.
	Strategies for preventing violence in sport to the performer and spectator.

3.2.4.5 Drugs in sport

AS and A-level content	A-level content only
	The social and psychological reasons behind elite performers using illegal drugs and doping methods to aid performance.
	The physiological effects of drugs on the performer and their performance.
	The positive and negative implications to the sport and performer of drug taking.
	Strategies for elimination of performance enhancing drugs in sport.
	Arguments for and against drug taking and testing.

3.2.4.6 Sport and the law

AS and A-level content	A-level content only
	The uses of sports legislation.

3.2.4.7 Impact of commercialisation on physical activity and sport and the relationship between sport and the media

AS and A-level content	A-level content only
	The positive and negative impact of commercialisation, sponsorship and the media.

3.2.4.8 The role of technology in physical activity and sport

AS and A-level content	A-level content only
Understanding of technology for sports analytics.	
	Functions of sports analytics.
	The development of equipment and

	facilities in physical activity and sport, and their impact on participation and performance.
	The role of technology in sport and its positive and negative impacts.