



WJEC Eduqas GCSE in PHYSICAL EDUCATION (FULL AND SHORT COURSES)

ACCREDITED BY OFQUAL

GUIDANCE FOR TEACHING

Teaching from 2016



This Ofqual regulated qualification is not available for candidates in maintained schools and colleges in Wales.



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INTRODUCTION

The WJEC Eduqas GCSE in Physical Education qualifications, accredited by Ofqual for first teaching from September 2016, are available to:

- all schools and colleges in England
- schools and colleges in independent regions such as Northern Ireland, Isle of Man and the Channel Islands
- independent schools in Wales.

They will be awarded for the first time in Summer 2018, using grades 9-1.

The GCSE in Physical Education specifications have two components.

The specifications builds on the tradition and reputation WJEC has established for clear, reliable assessment supported by straightforward, accessible guidance and administration.

Key features include:

- Opportunities for flexible teaching approaches
- Straightforward wording of questions
- Accessibility of materials
- High-quality examination and resource materials

The full set of requirements is outlined in the specifications which can be accessed on the Eduqas website.

In addition to this guidance, support is provided in the following ways:

- Specimen assessment materials
- Face-to-face CPD events
- Examiners' reports on each question paper
- Free access to past question papers and mark schemes via the secure website
- Direct access to the subject officer
- Free online resources
- Exam Results Analysis
- Online Examination Review

If you have any queries please do not hesitate to contact:

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AIMS OF THE GUIDANCE FOR TEACHING

The principal aims of the Guidance for Teaching are to offer support to teachers in their delivery of the new WJEC Eduqas GCSE in Physical Education specifications and offer guidance as to the requirements of the qualifications and the assessment process.

Content that is only applicable to the full course is clearly shown throughout the guidance document.

The Guidance is **not intended as a**

comprehensive reference, but as support for teachers to develop stimulating and exciting courses tailored to the needs and skills of their own students in their particular institutions. The Guidance for Teaching contains detailed clarification and guidance on the subject content as well as links/connections to other topic areas.

A new question bank which allows users to generate their own revision papers using questions from past papers will be available soon.



Area of study: Health, training and exercise (1)

Content:

- Health, fitness and well-being.
- Physical activity, health and fitness. (Full course only)
- Consequences of sedentary lifestyle.
- Diet and nutrition.

Application:

Learners will need to know:

- 1. Definitions and knowledge of relationship between health, fitness and well-being.
- 2. Lifestyle choices, e.g. smoking, drinking, drugs, exercise and diet.
- 3. Links between adherence and motivation.
- 4. Health benefits of exercise that include physical, mental and social.
- 5. Risk of a sedentary lifestyle: stress, hypertension, obesity, arthrosclerosis, poor selfesteem, poor body image and self-confidence.
- 6. Learners will need to apply the principles of training to improving health for sedentary individuals and fitness for sportspersons.
- 7. Energy balance equation, functions of nutrients including carbohydrates, protein, fats, minerals and hydration.

Case study:

'Obesity related illness is responsible for 1:3 deaths in Western Europe.'

- (a) What are the causes of obesity?
- (b) What can be done to combat this problem locally and nationally?
- (c) What is the role of diet and nutrition in combating obesity?
- (d) What is the role of diet/nutrition and exercise?

Learners can:

- Research diet and exercise patterns within class and the community.
- Compare parents' activity to their own.
- Look at the provision for physical activity in school and in the community.
- Develop strategies that could be used to help with motivation and therefore adherence.



Area of study: Health, training and exercise (2)

Content:

- Components of fitness.
- Measuring health and fitness.
- Methods of training.
- Principles of training and exercising.

Application:

Learners will need to know:

- 1. The components of fitness for specific sports/activities, and the measures of these components.
- 2. The importance of testing/measuring using the concepts of reliability and validity.
- 3. How to develop the components of fitness through various training methods.
- 4. How to apply the principles of training to improve health and fitness.

Case study:

Amy is a 16 year old netball player who has identified cardiovascular endurance, speed, agility and reaction time as the components of fitness that need to be developed for next season.

Learners can:

- Research the tests that measure the components of fitness.
- Research the methods of training that will improve the components.
- Develop a training programme for 10 weeks and apply the principles of training.
- Discuss what the improvement would look like in the game, and what adaptations may have taken place.

- Goal-setting and SMART targets
- Movement analysis
- Performance analysis and evaluation (Component 2)
- Long-term effects of exercise



Area of study: Health, training and exercise (3)

Content:

• Training zones.

Application:

Learners will need to know:

- 1. The link between the training and training zones, monitoring heart rates compared with the intensity and duration of training.
- 2. The link between heart rates and energy systems.
- 3. The link between heart rate and fitness, health, age and gender.

Case study:

Look at the table below:



The table gives information about intensity of activity, but does not identify duration, fitness or age.

Learners can research:

- What would be the duration associated with each component in the table.
- What would be the specific values for a 16 year old compared with a 40 year old.
- What the difference in heart rates would be for fit and sedentary individuals.
- How to plot and analyse data from a graph, not a table.

Making connections across the specification

• Cardio-respiratory and vascular system



Area of study: Health, training and exercise (4)

Content:

• Warm up and cool down.

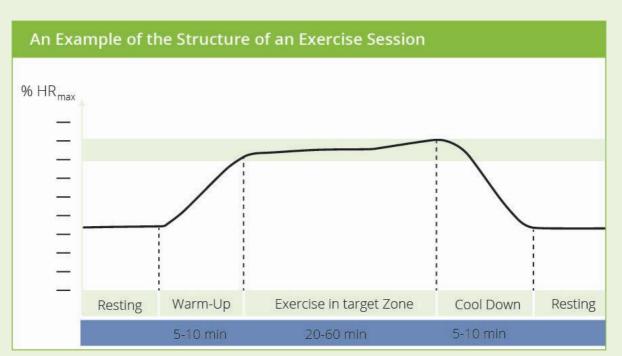
Application:

Learners will need to know:

- 1. Why warm up is important both physically and psychologically.
- 2. Why cool down is important to aid recovery, remove waste products and replenish nutrients.
- 3. The phases of a warm up in terms of raising heart rate, stretching, higher intensity and activity specificity.

Case study:

Below is a chart of an exercise session.



Learners can research:

- Why the session has a warm up and cool down.
- What does the warm up phase consist of.
- What would the warm up phase look like for a games player (reflect on own experiences).

Making connections across the specification

• Methods of training



Area of study: Exercise physiology (1)

Content:

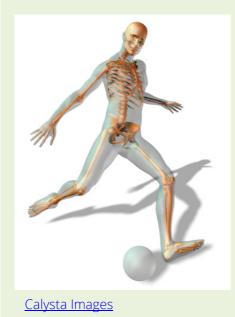
• Muscular-skeletal system.

Application:

Learners will need to know:

- 1. The structure of the skeletal system including the labelling of bones: radius, ulna, humerus, femur, tibia, fibula.
- 2. Synovial joints including ball and socket, hinge and pivot and the movements at these joints including flexion, extension, adduction, abduction, circumduction, rotation.
- 3. Function of the skeletal system including movement, support, protection and production of blood cells.
- 4. The structure of the muscular system including the types of muscles: smooth, cardiac, skeletal, involuntary and voluntary.
- 5. Labelling of major muscles including biceps, triceps, deltoid, pectorals, latissimus dorsi, gluteals, quadriceps, hamstrings, gastrocnemius.
- 6. The function of the muscles including muscle fibre types: slow/fast type I, type II. Characteristics and their function within a variety of sports and aerobic and anaerobic exercise. The function of ligaments and tendons.
- 7. The relationship between movement and the muscles that cause the movement.

Case study:



When kicking a football movement occurs where two bones articulate (join).

Focus on the hip, shoulder, elbow and knee.

Learners can research:

- The bones that articulate at the joints.
- The classification of the joints.
- The movements that occur at the joints.
- The muscles that cause the movement.
- The speed of contraction for different sports and therefore the muscle fibres used.

Making connections across the specification

• Movement analysis – muscle contractions



Area of study: Exercise physiology (2)

Content:

• Cardio-respiratory and vascular system.

Application:

Learners will need to know:

- 1. The structure of the cardiovascular system including the labelling of the heart: atriums, ventricles.
- 2. The pulmonary and systemic circulatory systems.
- 3. Function of the cardiovascular system including transportation of nutrients, oxygen and waste products, thermoregulation, vasodilation, vasoconstriction.
- 4. Cardiac values at rest and during exercise; cardiac output, heart rate, stroke volume, blood pressure: systolic, diastolic, values at rest and exercise.
- 5. The structure of the cardio-respiratory system including trachea, bronchus, bronchioles, alveoli, diaphragm.
- 6. Function of cardio-respiratory system to include gaseous exchange, diffusion, haemoglobin, oxygenation of blood.
- 7. Respiratory values to include vital capacity, minute ventilation, breathing frequency (rate), tidal volume, values at rest and exercise.

Case study:

Look at the pulmonary and systemic circulatory systems and compare the CV and CR values from rest to exercise.

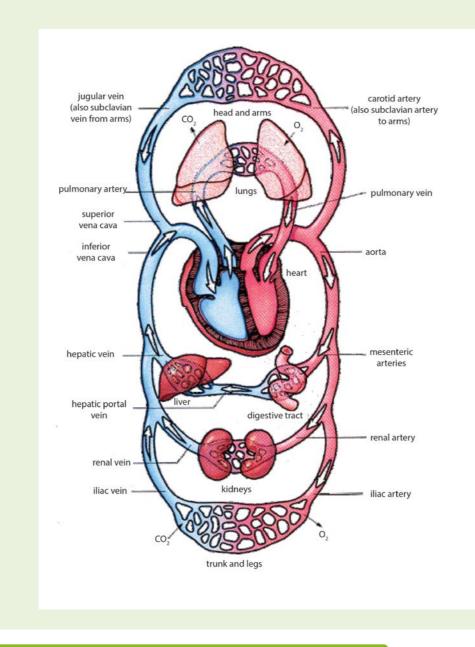
Rest values: Q = SV x HR Cardiac Output: 5.6l/min Stroke Volume: 80 ml Heart Rate: 70 b/min

Blood Pressure: 120/80 mmHg ME = BF x TV Minute Ventilation: 6l/min Tidal Volume: 500 ml Breathing Frequency: 12 b/min

Learners can research:

- Value during exercise:
 - o Aerobic (sub max)
 - o Anaerobic (max)





- Short and long-term effects of exercise
- Data analysis



Area of study: Exercise physiology (3)

Content:

• Aerobic and anaerobic exercise.

Application:

Learners will need to know:

- 1. Overview of the energy systems including creatine phosphate, lactic acid, aerobic characteristics, oxygen debt, anaerobic threshold.
- 2. The characteristic and factors affecting aerobic/anaerobic exercise including intensity, duration, nutrients, waste products, nutrients for fuel and recovery.

Case study:

Depending upon whether the body uses oxygen or not, determine if the activity is aerobic (with oxygen) or anaerobic (without oxygen).

Which of the following activities are aerobic and anaerobic?



Learners can research:

- The two types of anaerobic system: creatine phosphate and lactic acid.
- The aerobic energy system.
- The characteristics of these systems including intensity and duration.

- Components of fitness
- Methods of training
- Muscular-skeletal system



Area of study: Exercise physiology (4)

Content:

• Short and long-term effects of exercise.

Application:

Learners will need to know:

- 1. The short-term effects: linked to intensity, duration, including increased heart rates, tidal volume, temperature, production of waste products.
- 2. The long-term effects: adaptations of the body's systems dependant on intensity and duration to include bone density, increased elasticity of muscles, hypertrophy, improved energy systems, increased stroke volume, decreased resting heart rate, blood pressure, decreased breathing frequency, increased vital capacity.
- 3. The effects of exercise linked to social and mental well-being.

Case study:

The short-term effects linked to the body's systems:

Body system	Short-term effects of exercise
Muscular	• Elasticity
	Increase in temperature
Skeletal	Joint mobility
Cardiovascular	 Heart rate, stroke volume, cardiac output, blood pressure
Cardiorespiratory	 Breathing frequency, tidal volume, minute ventilation
Energy systems	 Production of waste/by products

The long-term effects linked to systems and exercise:

Body system	Adaptation	Type of training (intensity/duration)
Muscular	e.g. hypertrophy	Weight – high intensity, short duration, low reps, heavy weight
Skeletal	e.g. bone density	High intensity – impact
Cardiovascular	e.g. capillarisation of muscles and lungs – more O_2 to diffuse	Continuous (endurance) aerobic training zone
Cardiorespiratory	e.g. increase in minute ventilation – get more O_2 into the body and remove more CO_2	75–80% of maximum heart rate, working at steady state for prolonged period of time
Energy systems	e.g. removal/tolerate more lactic acid, therefore offset fatigue	Anaerobic threshold for prolonged periods of time
Psychologically	e.g. feel good factor – self-esteem, self-image	Any exercise

Learners can research:

• Other short and long-term effects of different types of exercise including specific values.



Area of study: Movement analysis (1)

Content:

• Muscle contractions.

Application:

Learners will need to know:

- 1. Isotonic contractions including eccentric, concentric isometric contractions.
- 2. Antagonistic muscle action agonists (prime movers), antagonists.

Case study:

Muscles work in pairs known as the antagonistic muscle action. When one contracts (agonist) the other relaxes (antagonist).

Using the picture:



- Identify the muscular contraction taking place at A, and the muscle causing the movement.
- 2. Describe the antagonist muscle action in the movement of kicking the football.

Making connections across the specification

• Muscular-skeletal system



Area of study: Movement analysis (2)

Content:

• Lever system.

Application:

Learners will need to know:

1. The classification of levers, with focus on the joints and leverage systems at the shoulder, elbow, knee and hip. The mechanical advantages of different classes of levers.

Case study:

Levers are formed from bones, joints and muscles in our bodies. The positioning of these will determine the classification. There are three classes of levers:

Classification of lever	Example in the body	Sporting example of use
First class lever	Neck	Heading the ball in football
Load		
Effort Fulcrum		
Second class lever	Heel	Jump shot in basketball
Load Effort Fulcrum		
Third class lever Effort Load	Knee	Flexion of the knee when running. Hamstrings create the effort, the lower leg the load, and the hinge joint at the knee the fulcrum

Learners can research:

• Examples of levers at the shoulder, hip and elbow.

Making connections across the specification

• Muscular-skeletal system



Area of study: Movement analysis (3)

Content:

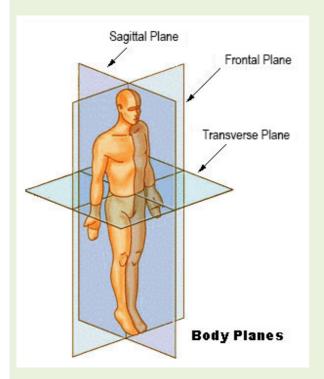
• Planes of and axes of movement.

Application:

Learners will need to know:

- 1. Planes of movement including sagittal, frontal and transverse.
- 2. Movements of flexion, extension, adduction and abduction with the planes of movement.

Case study:



Sagittal Plane – front to back Frontal Plane – side to side Transverse Plane – top to bottom

Plane	Movement	Sporting example
Sagittal	e.g. flexion/extension hip	
Frontal	e.g. adduction and abduction at shoulder	
Transverse	e.g. circumduction and rotation at shoulder	

Learners can:

- Research sporting examples that occur through the different planes of movement.
- Analyse a sporting movement, e.g. a basketball free throw.

Making connections across the specification

• Muscular-skeletal system



Area of study: Movement analysis (4)

Content:

• Planes of and axes of movement.

Application:

Learners will need to know:

1. Axes of movement: sagittal, frontal and vertical and the movements that occur through these axes.

Case study:

Axes of movement at the point around which the body rotates.

Axes	Movement	Sporting example
Sagittal		e.g. Cartwheel
Frontal		e.g. forward roll
Vertical		e.g. turning and changing direction in netball

Learners can:

- Research sporting examples that occur through the different axes of movement.
- Analyse a sporting movement, e.g. a netball dodge.

- Planes of movement
- Muscular-skeletal system



Area of study: Movement analysis (5) - Full course only

Content:

• Sports technology.

Application:

Learners will need to know:

- 1. The role of technology in analysis of movement and improvement in sports performance.
- 2. The role of technology in officiating.
- 3. The role of technology in coaching.
- 4. The positive and negative effects of technological developments.

Case Study:

Technology applied to physical activity has played an important role both in training and competition, from the creation of new sports facilities, the equipment used, officiating, safety, analysis, training technology and the improvement in coaching.

It is important that sports technology does not overtake competitors' prowess and that it is the ability, skill, dedication and hard work that are the key factors which determine success, as opposed to technological development.

Learners can research:

- How technology is used in a sport of their choice at an elite level.
- The impact that the technology has on the performer, the official and the coach (the impact of the technology rather than the technology itself (analysis rather than descriptive)).
- Sports where technology is more important than the performers themselves.
- What impact does technology have on the spectator.







Making connections across the specification

• Socio-cultural issues and performance



Area of study: Psychology of sport and physical activity (1) - Full course only

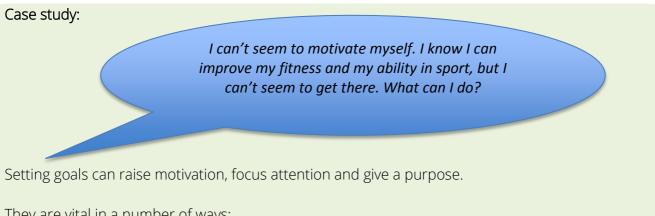
Content:

• Goal-setting.

Application:

Learners will need to know:

- 1. How goal-setting can impact upon health, well-being and performance.
- 2. Why goal-setting is important.
- 3. SMART targets.



They are vital in a number of ways:



Learners can research:

- A specific goal that they would like to achieve.
- How setting SMART targets helps to achieve goals.
- How goal-setting helps with adherence.

Targets provide a clear focus and direction and act as the stages to achieving the final goal. SMART targets to support goal-setting: specific, measurable, agreed, realistic and time phased targets. These targets are linked to specific activities.

- Mental preparation
- Motivation



Area of study: Psychology of sport and physical activity (2) - Full course only

Content:

• Information processing.

Application:

Learners will need to know:

- 1. The information processing model including input, decision-making, output and feedback.
- 2. The function of feedback including knowledge of results and knowledge of performance.

Case study:

When skills are learned, sports performers must process information. For learning to take place, feedback allows the athlete to refine the process. The feedback can be internal (self) or external (coach), and it can be linked to the outcomes or performance.



Feedback is the response to the output, and is the information that can affect future performances and enable learning to take place.

Learners can research:

- Effective feedback, e.g. accurate, concise, immediate, easily understood, truthful.
- Intrinsic and extrinsic feedback.
- Knowledge of results and knowledge of performance.

- Guidance
- Types of practice



Area of study: Psychology of sport and physical activity (3) - Full course only

Content:

• Guidance.

Application:

Learners will need to know:

- 1. The types of guidance including verbal, visual, manual, mechanical.
- 2. The relationship of types of guidance to stages of learning cognitive, associative, autonomous.

Case study:

Guidance is part of the learning process. The different types of guidance are used at different stages of learning and in different situations to support and develop the performer and performance.



Use the images to discuss the different types of guidance.

There are three stages of learning:

Stage of learning	Characteristics
Cognitive (beginner)	Inconsistent, makes mistakes
Associative (developing)	Understands, becoming consistent
Autonomous (expert)	Consistent and effective

The learners will need to link the types of guidance and PRACTICE to the stages of learning.

Learners can research:

- The type of guidance that is best for the different stages of learning.
- The type of practice to the stage of learning.

Making connections across the specification

• Types of practice



Area of study: Psychology of sport and physical activity (4) - Full course only

Content:

- Mental preparation.
- Motivation.

Application:

Learners will need to know:

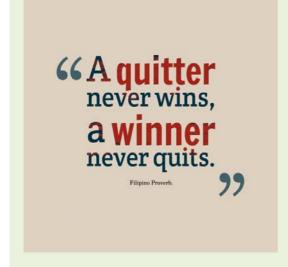
- 1. How mental preparation can help with motivation and can improve performance through imagery/visualisation/mental rehearsal.
- 2. Types of motivation including intrinsic and extrinsic and their links to adherence and sporting success.

Case study:

Being in the zone or in the right frame of mind will help sportspeople to be successful. Mental preparation will:

- develop confidence self-belief
- improve concentration clear focus on the task
- control emotions arousal and anxiety
- develop adherence commitment over time
- improve motivation.

Imagery, visualisation and mental rehearsal are all strategies that support mental preparation.



Motivation is a combination of determination and enthusiasm to achieve. It can be in two forms:

- 1. Intrinsic inner drive, fun and enjoyment.
- 2. Extrinsic outside influence, reward, prize money, trophies.

Learners can research:

- British cycling 'marginal gains'.
- How elite athletes prepare for events and are able to block out the crowd.

- Goal-setting
- Socio-cultural issues and performance



Area of study: Psychology of sport and physical activity (5) - Full course only

Content:

• Characteristics of a skilled performance.

Application:

Learners will need to know:

Characteristics of a skilled performance: technique, consistency, accuracy, efficiency, effectiveness, confidence, control and aesthetics.

Case study:

A skilled performance can be identified when demonstrating the following characteristics:



Effectiveness, efficient and responsive.

Effective	Efficient	Responsive
Accuracy	Technique	Decision-making
Consistency	Fluent	Adaptive
Control	Aesthetic	
Confidence		

Learners can research:

- What makes a skilled performer, by using a sporting hero.
- Sporting examples of effective, efficient and responsive actions.

- Guidance
- Information processing



Area of study: Psychology of sport and physical activity (6) - Full course only

Content:

• Classifications of skills.

Application:

Learners will need to know:

- 1. Classification skills along the following continuum:
 - (a) basic/complex
 - (b) open/closed
 - (c) self/externally paced.

Case study:

Skills have many characteristics and depend upon three variables:

- 1. Environment
- 2. Complexity
- 3. Pace.

Skills vary significantly and are sometimes difficult to categorise. They are therefore placed along a continuum. The justification for the placement is sometimes more important than the placement itself.

Environment	Complexity	Расе
Open/closed	Basic/complex	Self/external
Weather, opposition, crowd,	Straightforward movements,	Performer in control of
variables	high levels of coordination	decisions compared with
		opposition

Learners can research:

- What makes a skilled performer, by using a sporting hero.
- Types of practice that would support the development of these skills.

Making connections across the specification

• Types of practice



Area of study: Psychology of sport and physical activity (7) - Full course only

Content:

• Types of practice.

Application:

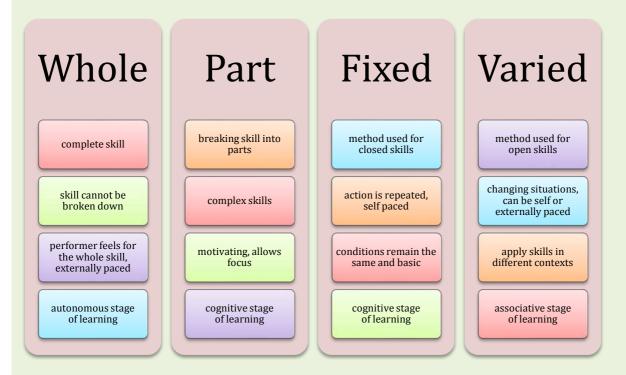
Learners will need to know:

- 1. The types of practice including whole/part, fixed/varied.
- 2. The links between practice, the learner and the type of skill.

Case study:

Practice is important for learning to take place. The types of practice will depend upon:

- skills being learnt environment, complexity and pace
- stage of learning cognitive, associative, autonomous.



Learners can research:

- The types of practice specific to a sporting example.
- Can all types of practice be appropriate for all stages of learning?

- Guidance
- Classification of skills



Area of study: Socio-cultural issues in sport and physical activity (1) - Full course only

Content:

- Participation.
- Provision.

Application:

Learners will need to know:

- 1. The factors that contribute to participation, provision and performance in sport and exercise.
- 2. The influence of a school's physical education programme, extra-curricular and wider curriculum, and their impact on development.
- 3. Strategies to improve participation, e.g. reformative policies such as anti-racism campaigns.
- 4. Provision for a variety of target groups to include: gender, race, disability. Strategies for increased involvement for these groups.

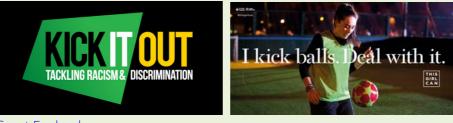
Case study:



Health and well-being are high on the Government's agenda. There are a significant number of factors that contribute to participation in sport and physical activity. These include family, friends, schools, location, society, cost, access, facilities, coaching, role models and provision.

Discuss specifically what has influenced you to take part in sport or physical activity.

What do learners understand by these campaigns?



Sport England

Learners can research:

- How opportunities can impact upon their health, well-being, activity levels and physical literacy.
- A campaign to improve participation in a specific sport.
- A strategy used to increase involvement of a target group.

Making connections across the specification

• Health, fitness and well-being



Area of study: Socio-cultural issues in sport and physical activity (2) - Full course only

Content:

• Performance.

Application:

Learners will need to know:

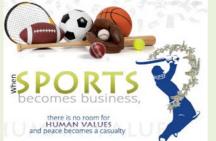
- 1. The commercialisation of sport including the role of media, advertising and globalisation of sport.
- 2. Ethical issues including gamesmanship, sportsmanship, financial issues and deviance.

Case study:

Is commercialisation of sport a good thing? The table below can be used as a discussion tool that could be populated. Each point would need an explanation.

Positive	Negative
Improves level of performance	More pressure
Improves money in sport	Increases deviance, e.g. performance enhancing
	drugs
Improves coaching	Too much courage
Brings in more sponsorship	Too expensive
Creates role models	Sensationalising sport
Focuses on top level sport	Becomes a spectacle rather than sporting
	performance
Allows access to top level sport and sports stars	Minority sports suffer – money is put into top
	sports only
Sport becomes more interactive	Media dictate what we watch – the rich become
	richer

Is there a link between commercialisation and gamesmanship? Has sport lost its values?



radiosai.org

Learners can research:

- The Olympic values.
- Values that we associate with sport.
- Are there different pressures from mass participation and elite sport?



Area of study: Performance analysis and evaluation - Full course only

Content:

Learners must design a personal training programme with the aim of providing recommendations to improve performance in **one** of the practical activities in which they were assessed.

Application:

Learners will need to produce written evidence which must include:

- 1. A self-analysis of current performance levels in **one** of the chosen practical activities.
- 2. A plan of the training programme with a clear objective.
- 3. Completion and monitoring of the training programme.
- 4. An evaluation of the training programme and the results.
- 5. Recommendations for improvements to personal performance.

Case study:

Setting out the personal fitness programme in a clear, concise, structured and evaluative approach that allows learners to access all of the assessment bands. Making the connection between the performance and the programme is vital.

Component	Evidence
1.	Introduction including sport, position, age,
	experience, current performance measures
	against normative data, testing, components
	of fitness specific to the sport and position
	or activity.
2.	Evaluation of performance measures
	identifying strengths and areas for
	improvement, SMART target.
3 & 4.	A programme plan with details of
	monitoring and adjustments. Evidence of
	principles, methods.
5.	Effectiveness of programme and
	improvements, comparisons, impact.
6.	Next steps, extend, challenge, change, other
	influencing factors.

NB: This work should be seen through the performance in the major activity and is not simply a paper exercise.