

## Summary of changes

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This guide outlines the changes to A-level Physical Education from our current specification (2580) to our new specification (7581). It presents a simple comparison of the main areas in which the specification has changed, including subject content and assessment.

Key points:

- Assessment is linear. Linear means that students will sit all their exams and submit all their non-exam assessment (NEA) at the end of the course.
- Students will need to gain quantitative skills relevant to the subject content to meet Ofqual requirements (it represents at least 5% of the overall A-level assessment).
- Subject content is split across two papers, with topic areas explained below. Each topic area has equal weighting in the papers as with the previous specification.

Our new specification has been developed in line with the regulatory requirements provided by the Department for Education (DfE) and Ofqual.

### Topics

Assessed	No longer assessed
<p>Paper 1:</p> <ul style="list-style-type: none"> <li>• Applied anatomy and physiology</li> <li>• Skill acquisition</li> <li>• Sport and society</li> </ul> <p>Paper 2:</p> <ul style="list-style-type: none"> <li>• Exercise physiology and biomechanics</li> <li>• Sport psychology</li> <li>• Sport and society and technology in sport</li> </ul>	<ul style="list-style-type: none"> <li>• PHED1 Applied Exercise Physiology: Health, exercise and fitness.</li> <li>• PHED1 Opportunities for Participation: Section 2 - The current provision for active leisure.</li> <li>• PHED1 Opportunities for Participation: Section 3 - The role of schools and national governing bodies in creating opportunities for increasing participation (expect Whole Sport plans).</li> </ul>

# Paper 1: Factors affecting participation in physical activity and sport

## Applied anatomy and physiology

Previously this was covered in PHED1 (AS) Applied Exercise Physiology and PHED3 (A2) Applied physiology to optimise performance sections.

### Cardiovascular system

This content was previously found in the PHED1 (AS) Applied Exercise Physiology: Cardiac function and Transport of blood gases.

What's new	What's gone	What's changed
<p>Students will be expected to interpret data and graphs relating to the cardiovascular system during different types of physical activity and sport.</p> <p>The receptors involved in regulation of responses during physical activity have been stated in the specification.</p>	<p>Pulmonary and systematic circulation related to the various blood vessels.</p> <p>Cardiac hypertrophy leading to bradycardia/athlete's heart.</p>	<p>Blood pressures/velocities are now assessed in relation to its relationship with venous return.</p>

### Respiratory system

This content was previously found in the PHED1 (AS) Applied Exercise Physiology: Pulmonary function.

What's new	What's gone	What's changed
<p>Students will be expected to interpret data and graphs relating to the respiratory system during different types of physical activity and sport. This could include a spirometer trace even though this isn't stated in the specification.</p>	<p>Mechanics of breathing.</p>	<p>Students will now only need to know the lung volumes stated in the specification.</p>

## Neuromuscular system

This content was previously found in the PHED3 (A2) Applied physiology to optimise performance: Muscles and Specialised training.

What's new	What's gone	What's changed
<p>Students will be expected to interpret data and graphs relating to the neuromuscular system during different types of physical activity and sport.</p> <p>Wave summation.</p> <p>Tetanic contraction.</p>	<p>Structure and function of muscles/fibres.</p> <p>Sliding filament hypothesis.</p>	<p>PNF stretching is taught in relation to the role of the proprioceptors to develop an understanding of neuromuscular control. This promotes the understanding of the interrelationship between the different areas of study as PNF stretching as a method is also covered under the subtopic of preparation and training methods.</p>

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

This content was previously found in the PHED1 (AS) Applied Exercise Physiology: Analysis of movement in specified sporting actions.

What's new	What's gone	What's changed
<p>Students will be expected to interpret data and graphs relating to the musculo-skeletal system during different types of physical activity and sport.</p>	<p>N/A</p>	<p>Students will be required to analyse any suitable sporting action. The questions will no longer be restricted to the sporting actions specified in the previous specification. The joint actions in each plane and axis have been specified to clarify.</p>

## Energy systems

This content was previously found in the PHED3 (A2) Applied physiology to optimise performance: Aerobic energy systems, Anaerobic energy systems, Specialised training and Muscles.

What's new	What's gone	What's changed
<p>Students will be expected to interpret data and graphs relating to the use of energy systems during different types of physical activity and sport and the recovery process.</p> <p>Lactate-producing capacity and sprint/power performance as key terms relating to anaerobic energy transfer.</p> <p>Indirect calorimetry as a measurement of energy expenditure.</p> <p>High Intensity Interval Training (HIIT) and Speed Agility Quickness as specialised training methods and their impact on the energy systems.</p>	N/A	<p>Students will now be required to link previous topics taught in isolation (muscles and specialised training methods) to energy systems and their impact on them. This is to promote the understanding of the interrelationship between the different areas of study.</p>

## Skill acquisition

This content was previously found in the PHED1 (AS) Skill Acquisition.

### Skill, skill continuums and transfer of skills

This content was previously found in the PHED1 (AS) Skill Acquisition: Skill and ability and Learning and performance.

What's new	What's gone	What's changed
High – low and simple – complex as skill continua.	Definition of skill. Difference between motor and perceptual abilities. Difference between skill and ability. Types of skill (cognitive, perceptual, psychomotor).	The different types of transfer of learning have been reduced to those stated in the specification with proactive and retroactive no longer assessed.

### Impact of skills classification on structure of practice for learning

This content was previously found in the PHED1 (AS) Skill Acquisition in practical situations (Section B).

What's new	What's gone	What's changed
N/A	Part and whole-part as methods of practice.	The methods of presenting practice and types of practice that were previously assessed in Section B of the PHED1 paper will no longer be assessed separately.

### Principles and theories of learning and performance

This content was previously found in the PHED1 (AS) Skill Acquisition: Learning and performance.

What's new	What's gone	What's changed
Constructivism – Social development theory (Vygotsky). Theorists are named to make it clearer for teachers and students.	N/A	Motor learning – Schmidt's schema theory now appears in the specification under memory models.

### Use of guidance and feedback

This content was previously found in the PHED1 (AS) Skill Acquisition in practical situations (Section B).

What's new	What's gone	What's changed
N/A	Terminal and concurrent types of feedback.	The methods of guidance and feedback that were previously assessed in Section B of the PHED1 will no longer be assessed separately.

### Memory models

This content was previously found in the PHED1 (AS) Skill Acquisition: Information processing.

What's new	What's gone	What's changed
<p>Application of Whiting's information processing model to a range of sporting contexts.</p> <p>Specific information processing terms:</p> <ul style="list-style-type: none"><li>• Perceptual mechanism</li><li>• Translatory mechanism</li><li>• Effector mechanism</li><li>• Muscular system output data</li><li>• Feedback data</li></ul> <p>which are given in the specification relating to the working memory model.</p>	<p>Open and closed-loop control.</p> <p>Motor programmes and sub routines.</p>	<p>Baddeley and Hitch, working memory model memory system has replaced the simple information processing model consisting of the short term sensory store, short term memory and long term memory. Students will be required to still understand the functions and characteristics of the components of the working memory model.</p> <p>Factors affecting response time as opposed to reaction time.</p>

### Sport and society

This content was previously found in the PHED1 (AS) Opportunities for Participation and PHED3 (A2) Evaluating contemporary influences.

## Emergence of globalisation of sport in the 21<sup>st</sup> century

This content was previously found in the PHED3 (A2) Evaluating contemporary influences: Section 2 - evaluates whether the Olympic ideal still has a place in modern-day sport and Section 4 - the factors that have influenced the commercialisation of modern-day sport.

What's new	What's gone	What's changed
<p>The social factors are studied specifically in relation to the development of football, tennis and athletics across the key time frames stated:</p> <ul style="list-style-type: none"> <li>• Pre-industrial (pre-1780) - Characteristics and impact on sporting recreation.</li> <li>• Pre-industrial (pre-1780) - Characteristics of popular and rational recreation linked to the two-tier class system.</li> <li>• Industrial and post-industrial (1780-1900) – The impact of the three-tier class system (emphasis on middle class and working class).</li> <li>• Industrial and post-industrial (1780-1900) – The consideration of the changing role of women in sport.</li> <li>• Post World War II (1950- present) - Golden triangle – the interrelationship between commercialisation (including sponsorship), media (radio, TV,</li> </ul>	<p>The contract to compete and its relevance to modern-day elite sport.</p>	<p>The key historical periods have been split up into:</p> <ul style="list-style-type: none"> <li>• Pre-industrial</li> <li>• Industrial and post-industrial</li> <li>• Post World War II</li> </ul> <p>to make it clearer for students to see the characteristics of each period and the impact it had on the sports of football, tennis and athletics.</p>

<p>satellite, internet and social media) and sports and governing bodies.</p> <ul style="list-style-type: none"> <li>• Post World War II (1950-present) – Factors affecting the emergence of elite female performers in football (players and officials), tennis and athletics in late 20<sup>th</sup> – early 21<sup>st</sup> century.</li> </ul>		
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### Sociological theory applied to equal opportunities

This content was previously found in the PHED1 (AS) Opportunities for Participation: Section 4 the potential barriers to participation and possible solutions for various target groups.

What's new	What's gone	What's changed
<p>Students will be required to interpret and analyse data and graphs relating to participation in physical activity and sport.</p> <p>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: Society, Socialisation, Social processes, Social issues and Social structures/stratification.</p> <p>Understanding of social action theory in relation to social issues in physical activity and sport.</p> <p>The interrelationship between Sport England, local and national partners to increase participation at</p>	<p>Inclusiveness as a key term.</p> <p>The need to give examples of equal opportunity, discrimination, stereotyping, inclusiveness and prejudice in sport.</p> <p>Socio-economic class as an under represented group.</p>	<p>N/A</p>



grass roots level and under-represented groups in sport.		
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## Paper 2: Factors affecting optimal performance in physical activity and sport

### Exercise physiology

This content was previously found in the PHED1 (AS) Applied Exercise Physiology and PHED3 (A2) Applied physiology to optimise performance.

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

This content was previously found in the PHED1 (AS) Applied Exercise Physiology: Nutrition and PHED3 (A2) Applied physiology to optimise performance: Preparation and training and Specialised training.

What's new	What's gone	What's changed
<p>The study of fat, vitamins and minerals and their exercise related function is now more prescribed by the details in the specification, eg fats (saturated fat, trans fat and cholesterol).</p>	<p>Protein supplements and herbal remedies as dietary supplements.</p> <p>The need for a balanced diet and the energy balance of food.</p> <p>The performer's use of nutritional information based on their activity, difference in diet composition between endurance athletes and power athletes.</p> <p>Definitions of obesity and the limitations in trying to define it.</p> <p>Percentage body fat/body composition and Body Mass Index (BMI) as measures of nutritional suitability.</p> <p>Electrolyte balance.</p> <p>Achieving optimal weight for activities.</p>	<p>The effects of ergogenic aids which were previously assessed in the A2 Preparation and training topic are now going to be taught under the Drugs in sport subtopic of Sport and society and The role of technology in physical activity and sport.</p> <p>Glycogen loading was previously taught as a specialised training method, however it is now taught as a dietary manipulation technique.</p>

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

This content was previously found in the PHED1 (AS) Applied Exercise Physiology in practical situations (Section B) and PHED3 (A2) Applied physiology to optimise performance: Specialised training.

What's new	What's gone	What's changed
<p>Quantitative, qualitative, objective and subjective as key data terms.</p> <p>Recovery as a principle of training.</p> <p>Fartlek training to improve aerobic power.</p> <p>Key terms associated with periodisation as detailed in the specification.</p>	<p>Over-training and tedium as principles of training.</p> <p>Mobility training.</p> <p>Thermoregulation in different environments.</p> <p>Fitness testing – reasons for testing, principles of maximal and sub-maximal tests, limitations of testing, specific test protocols.</p> <p>Calculating working intensities for optimal gains through heart rate and Borg scale, weights – one rep max.</p>	<p>Validity and reliability that were previously assessed in Section B of the PHED1 paper will no longer be assessed separately.</p> <p>Physiological effects and benefits of a warm-up and cool down that were previously assessed in Section B of the PHED1 paper will no longer be assessed separately.</p> <p>The training methods included have been linked to a stated component of fitness to limit the breadth of knowledge of each method.</p> <p>Interval has replaced intermittent training.</p> <p>PNF stretching under this subtopic refers to the method adopted to increase flexibility. The physiology that explains the working of PNF stretching is covered under the neuro-muscular subtopic of applied anatomy and physiology in paper 1. This is to promote the understanding of the interrelationship between the different areas of study.</p>

## Injury prevention and the rehabilitation of injury

This content was previously found in the PHED3 (A2) Applied physiology to optimise performance: Sports injuries.

What's new	What's gone	What's changed
<p>Types of injury (acute and chronic).</p> <p>Injury prevention methods (Screening, protective equipment, warm up, flexibility training, taping and bracing).</p> <p>Injury rehabilitation methods (proprioceptive training, strength training, hyperbaric chambers, cryotherapy, hydrotherapy).</p> <p>Recovery from exercise (compression garments, massage/foam rollers, cold therapy, ice bath, cryotherapy).</p> <p>Physiological reasons for hyperbaric chambers and cryotherapy used in injury rehabilitation.</p> <p>Importance of sleep and nutrition for improved recovery.</p>	N/A	N/A

## Biomechanical movement

This content was previously found in the PHED1 (AS) Applied Exercise Physiology and PHED3 (A2) Applied physiology to optimise performance.

## Biomechanical principles

This content was previously found in the PHED3 (A2) Applied physiology to optimise performance: Mechanics of movement.

What's new	What's gone	What's changed
<p>Students will be expected to use definitions, equations and formulae and units of measurement for different scalars specified.</p> <p>Students will need to have the ability to plot, label and interpret biomechanical graphs and diagrams relating to biomechanical principles outlined in the specification.</p> <p>Centre of mass.</p> <p>Factors affecting stability.</p>	<p>Vectors.</p>	<p>The previous PHED3 topic Mechanics of movement has been subdivided in the new specification to provide more detail and a clearer framework for each topic for teachers and students.</p>

## Levers

This content was previously found in the PHED1 (AS) Applied Exercise Physiology: Levers.

What's new	What's gone	What's changed
<p>N/A</p>	<p>N/A</p>	<p>Although students have previously been required to sketch and label a lever diagram, students will need to have the ability to label lever diagrams that are technically sound.</p>

### Linear motion

This content was previously found in the PHED3 (A2) Applied physiology to optimise performance: Mechanics of movement.

What's new	What's gone	What's changed
Students will need to have the ability to plot, label and interpret biomechanical graphs and diagrams relating to linear motion as outlined in the specification.	N/A	Students are also now required to know the units of stated vectors and scalars as well as definitions and equations.

### Angular motion

This content was previously found in the PHED3 (A2) Applied physiology to optimise performance: Mechanics of movement.

What's new	What's gone	What's changed
Students will need to have the ability to plot, label and interpret biomechanical graphs and diagrams relating to angular motion as outlined in the specification.  The application of Newton's laws to angular motion.	N/A	Students are now required to know the units for stated angular motion terms as well as definitions and equations.

### Projectile motion

This content was previously found in the PHED3 (A2) Applied physiology to optimise performance: Mechanics of movement.

What's new	What's gone	What's changed
Students will need to have the ability to plot, label and interpret biomechanical graphs and diagrams relating to projectile motion as	N/A	Students are required to understand flight paths of different sporting objects.

outlined in the specification.		
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### Fluid motion

This is a new topic.

What's new	What's gone	What's changed
<p>Dynamic fluid force.</p> <p>Factors that reduce and increase drag and their application to sporting situations.</p> <p>The Bernoulli principle applied to sporting situations.</p> <p>Students will need to have the ability to plot, label and interpret biomechanical graphs and diagrams relating to fluid motion.</p>	N/A	N/A

### Sport psychology

This content was previously found in the PHED1 (AS) Skill Acquisition and PHED3 (A2) Psychological aspects that optimise performance.

#### Aspects of personality

This content was previously found in the PHED3 (A2) Psychological aspects that optimise performance: Aspects of personality.

What's new	What's gone	What's changed
N/A	<p>Definition of personality.</p> <p>Use of personality testing.</p> <p>Profile of mood states (POMS).</p>	<p>More detail has been given in relation to the interactionist perspectives so students are guided to know both Lewin and Hollander's theories.</p>

## Attitudes

This content was previously found in the PHED3 (A2) Psychological aspects that optimise performance: Attitudes.

What's new	What's gone	What's changed
N/A	Definition of an attitude.	N/A

## Arousal

This content was previously found in the PHED3 (A2) Psychological aspects that optimise performance: Arousal. There are no changes within this subtopic.

## Anxiety

This content was previously found in the PHED3 (A2) Psychological aspects that optimise performance: Controlling anxiety.

What's new	What's gone	What's changed
N/A	N/A	Goal setting is now in the specification as a separate subtopic.  Cognitive and somatic techniques are now under a separate subtopic of stress management.

## Aggression

This content was previously found in the PHED3 (A2) Psychological aspects that optimise performance: Aggression.

What's new	What's gone	What's changed
N/A	Channeled and instrumental aggression.  Strategies to control aggression.	N/A

## Motivation

This content was previously found in the PHED1 (AS) Skill Acquisition: Learning and performance. There are no changes with this subtopic.

## Achievement motivation theory

This content was previously found in the PHED3 (A2) Psychological aspects that optimise performance: Aspects of personality.

What's new	What's gone	What's changed
N/A	Development of avoidance behaviour.	N/A

## Social facilitation

This content was previously found in the PHED3 (A2) Psychological aspects that optimise performance: Confidence.

What's new	What's gone	What's changed
Zajonc's model has been stated in the specification to guide students.	Baron's distraction conflict theory, home field advantage.	Social facilitation was previously taught under the subtopic of confidence and is now a separate subtopic.

## Group dynamics

This content was previously found in the PHED3 (A2) Psychological aspects that optimise performance: Group success.

What's new	What's gone	What's changed
Tuckman's model has been stated in the specification to guide students.	N/A	N/A



### Importance of goal setting

This content was previously found in the PHED1 (AS) Skill Acquisition: Learning and performance and PHED3 (A2) Psychological aspects that optimise performance: Controlling anxiety.

What's new	What's gone	What's changed
The inclusion of SMARTER in the specification to guide teachers and students.	N/A	N/A

### Attribution theory

This content was previously found in the PHED3 (A2) Psychological aspects that optimise performance: Attribution theory.

What's new	What's gone	What's changed
Attribution process. Strategies to avoid learned helplessness leading to improvements in performance.	N/A	Link between attribution, task persistence and motivation. Previously motivation was not included.

### Self-efficacy and confidence

This content was previously found in the PHED3 (A2) Psychological aspects that optimise performance: Confidence.

What's new	What's gone	What's changed
Characteristics of self-efficacy, self-confidence and self-esteem. Vealey's Model of self-confidence.	Baron's distraction-conflict theory.	Social facilitation and inhibition are now under a separate subtopic within the specification.

### Leadership

This content was previously found in the PHED3 (A2) Psychological aspects that optimise performance: Leadership. There are no changes within this subtopic.

## Stress management

This content was previously found in the PHED3 (A2) Psychological aspects that optimise performance: Controlling anxiety.

What's new	What's gone	What's changed
Explanation of the terms 'stress' and 'stressor'.  Psychological skills training (PST) as a cognitive technique.	N/A	N/A

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

This content was previously found in the PHED1 (AS) Opportunities for Participation and PHED3 (A2) Evaluating contemporary influences.

### Concepts of physical activity and sport

This content was previously found in the PHED1 (AS) Opportunities for Participation: Section 1 concepts, categorisations and benefits of physical activity to both the individual and society.

What's new	What's gone	What's changed
School sport as a concept.	The characteristics and objectives of play, outdoor adventurous activities, leisure and active leisure.  The benefits of play, physical education, active leisure, outdoor and adventurous activities and sport to the individual and to society.	Physical recreation as opposed to recreation.

### Development of elite performers in sport

This content was previously found in the PHED1 (AS) Opportunities for Participation: Section 3 - The role of schools and national governing bodies in creating opportunities for increasing participation and PHED3 (A2) Evaluating contemporary influences: Section 1 - The concepts and characteristics of World Games and their impact on the state and individual.

What's new	What's gone	What's changed
N/A	Sport England/Wales/Scotland/Northern Ireland, Sportscoach UK, British Olympic Association, National Lottery and Sports Aid have been removed from the organisations list who provide support and progression from talent identification through to elite performance.	Students will have to consider the personal factors as well as the social and cultural factors required to support progression from talent identification to elite performance.  Whole Sport plans where previously taught in the AS Opportunities for participation section, now covered under this subtopic.

### Ethics in sport

This content was previously found in the PHED3 (A2) Evaluating contemporary influences: Section 2 - evaluates whether the Olympic ideal still has a place in modern-day sport and Section 3 - The causes of deviance in sport and the link between sport and the law as a result.

What's new	What's gone	What's changed
Amateurism, the Olympic Oath and win ethic as key terms.	The Olympic Ideal.	Positive and negative forms of deviance are now only studied in relation to the performer and not the spectator.

### Violence in sport

This content was previously found in the PHED3 (A2) Evaluating contemporary influences: Section 3 - The causes of deviance in sport and the link between sport and the law as a result. There are no changes within this subtopic.

### Drugs in sport

This content was previously found in the PHED3 (A2) Evaluating contemporary influences: Section 3 - The causes of deviance in sport and the link between sport and the law as a result.

What's new	What's gone	What's changed
The reasons behind elite performers using illegal drugs and doping methods to aid performance should be classified as social or psychological.  The physiological effects of named drugs on the performer and their performance.	N/A	N/A

### Sport and the law

This content was previously found in the PHED3 (A2) Evaluating contemporary influences: Section 3 - The causes of deviance in sport and the link between sport and the law as a result.

What's new	What's gone	What's changed
The uses of sports legislation in relation to coaches.	The increased number of prosecutions within sport and the reasons for this.	N/A

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

This content was previously found in the PHED3 (A2) Evaluating contemporary influences: Section 4 - The factors that have influenced the commercialisation of modern-day sport.

What's new	What's gone	What's changed
N/A	The positive and negative impact of commercialisation, sponsorship and the media on The World Games.	The impact of technology in now covered under the technology in sport subtopic below.

## The role of technology in physical activity and sport

This is new content for the A-level qualification.

What's new	What's gone	What's changed
<p>Students will need to be able to understand different types and use of data analysis to optimise performance.</p> <p>Understanding of technology for sports analytics.</p> <p>Functions of sports analytics.</p> <p>The development of equipment and facilities in physical physical activity and sport, and their impact on participation and performance.</p> <p>The role of technology in sport and its positive and negative impacts was previously assessed in PHED3 Evaluating contemporary issues.</p>	N/A	N/A

## Assessment

New assessment consists of an exam (70%) and NEA (30%).

## Exam

What's new	What's the same	What's gone/changed
<ul style="list-style-type: none"> <li>• All examinations are at the end of the two year course.</li> <li>• A wider range of question styles.</li> <li>• Assessment of quantitative skills, at least 5% of the total assessment.</li> </ul>	<ul style="list-style-type: none"> <li>• As with the previous specification, there will still be three sections to each of the papers, all identical in size.</li> <li>• Structure of the assessment for the two papers is the same. Each paper carries 105 marks.</li> </ul>	<ul style="list-style-type: none"> <li>• The content previously assessed in Section B of the PHED1 paper (Applied Exercise Physiology and Skill Acquisition in practical situations) will not be assessed separately and is included within the specification alongside all other content.</li> <li>• There will be the removal of choice as with the current PHED3 paper and all questions are compulsory.</li> </ul>

## NEA

What's new	What's the same	What's gone/changed
<ul style="list-style-type: none"> <li>• Students are assessed as either a player/performer or coach in the full sided version of one activity of their choice, from the given list.</li> <li>• 15% of the assessment is for the practical and 15% of the assessment is for the analysis and evaluation of performance.</li> <li>• Inclusion of specialist activities for students with disabilities.</li> <li>• The practical assessment will be</li> </ul>	N/A	<ul style="list-style-type: none"> <li>• There is a reduced activity list, which is the same for all boards.</li> <li>• Students are only assessed in one activity.</li> </ul>

<p>marked out of three areas of assessment, each worth 15 marks.</p> <ul style="list-style-type: none"><li>• The analysis and evaluation of assessment will be marked out of 45: analysis (20 marks) and evaluation (25 marks).</li><li>• Levels of response grids will be used for all assessment.</li></ul>		
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