OCR A Level Physical Education (H555)

Summer Transition Work

Physiological, Psychological and Socio-Cultural Factors

Components 01, 02 and 03

Name: _____ **Tutor Group:** _____ **Date:** _____

WELCOME Hello and well done for choosing A Level PE!

This workbook is designed to give you a head start before you begin your OCR A Level in Physical Education (H555) in September. The course is split into three areas of theory and two pieces of non-exam assessment (NEA):

- **Physiological factors affecting performance (Component 01) - 30% of the A Level, 2-hour exam**
- **Psychological factors affecting performance (Component 02) - 20% of the A Level, 1-hour exam**
- **Socio-cultural issues in physical activity and sport (Component 03) - 20% of the A Level, 1-hour exam**
- **Practical Performances (Component 05) - 15% NEA - performing or coaching one activity**
- **Evaluating and Analysing Performance for Improvement (Component 06) - 15% NEA**

This workbook focuses on the three examined theory components, since these underpin everything else on the course. Work through each section, completing the tasks, watching the videos and attempting the example questions. Bring this completed booklet with you in September.

HOW TO USE THIS BOOKLET Getting the most from your summer preparation

- Each task is designed to take between 2 and 5 hours - don't rush them, and spread them across the summer
- Watch the recommended videos before attempting each task - they will make the content much clearer
- Use the key terms tables to start a glossary - you'll be building your PE vocabulary throughout the two years
- Attempt every exam-style question, even if you're not sure of the answer - effort matters more than accuracy at this stage
- This A Level has a strong scientific and analytical focus - get comfortable with technical vocabulary early
- Complete the reflection boxes honestly - they'll help your teachers support you from day one

Contents

About Your A Level PE Course

OCR Specification H555 | First Assessment 2018 | Examined June each year

Course Structure

Your A Level is made up of five components. You must complete all five to be awarded the full A Level.

Component	Focus	Assessment	Weighting
01: Physiological factors	Anatomy & physiology, exercise physiology, biomechanics	2hr written exam	30%
02: Psychological factors	Skill acquisition, sports psychology	1hr written exam	20%
03: Socio-cultural issues	Sport & society, contemporary issues	1hr written exam	20%
05: Practical Performances	Performing or coaching one activity	NEA (moderated)	15%
06: Evaluating & Analysing Performance	Oral analysis of a peer's performance	NEA (moderated)	15%

Assessment Objectives

Across the theory papers, you are tested against four assessment objectives. Getting familiar with these now will help you understand what examiners are looking for from the very first lesson.

AO	What it means
AO1	Demonstrate knowledge and understanding of the factors that underpin performance and involvement in physical activity and sport
AO2	Apply knowledge and understanding of those factors - usually through sporting examples and scenarios
AO3	Analyse and evaluate the factors that underpin performance and involvement - this means weighing things up and reaching a judgement
AO4	Demonstrate and apply relevant skills and techniques in physical activity and sport; analyse and evaluate performance (assessed in the NEA)

A Few Important Things to Know

GOOD TO KNOW Features of this course that are different from GCSE

- This course is far more scientific and analytical than GCSE PE - you'll need to learn precise technical vocabulary and apply it accurately
- There is a quantitative skills element (5% of the A Level) - you'll interpret graphs, use formulae and complete calculations, particularly in biomechanics and exercise physiology

- Extended response questions require you to construct a sustained, logical argument - not just list facts
- Synoptic assessment means you'll need to link knowledge across different topics within a component, showing how they interrelate
- Your NEA requires you to be assessed as a performer OR coach in one activity, and to evaluate a peer's performance in another oral assessment

Component 01: Physiological Factors Affecting Performance

30% of the A Level | 2-Hour Written Exam | 90 Marks

Overview

This is the largest component of your A Level and focuses on the science behind physical activity: how your body's systems work, how they respond to exercise, and how forces affect movement. It's split into three topic areas.

Topic Areas	What You'll Cover
• 1.1 Applied anatomy and physiology • 1.2 Exercise physiology • 1.3 Biomechanics	• The skeletal, muscular, cardiovascular and respiratory systems at rest, during exercise and recovery • Energy systems, training methods, diet, ergogenic aids and injury • Forces, levers, motion and projectiles applied to sport

Key Terms to Know

Begin learning these now - they appear constantly throughout Year 12 and 13.

Key Term	Definition
Cardiac output	The volume of blood pumped by the heart per minute (heart rate x stroke volume)
Stroke volume	The volume of blood ejected from the heart with each contraction
VO2 max	The maximum rate at which the body can take in and use oxygen during exercise
ATP (Adenosine Triphosphate)	The body's immediately usable form of energy - referred to as the 'energy currency'
ATP-PC system	An anaerobic energy system using phosphocreatine, providing very rapid but short-lived energy
Agonist / antagonist	The agonist is the muscle causing a movement; the antagonist is the muscle relaxing to allow it
EPOC	Excess Post-exercise Oxygen Consumption - the extra oxygen consumed during recovery after exercise
1st/2nd/3rd class lever	Classifications of lever systems based on the relative position of the fulcrum, load and effort
Newton's Laws of Motion	Three fundamental laws describing inertia, acceleration and reaction, applied to sporting movement

Centre of mass	The point at which a body's mass is evenly balanced in all directions; affects stability
Periodisation	The structured division of a training year into macrocycles, mesocycles and microcycles
Ergogenic aid	Any substance, technique or device used to enhance sporting performance

Pre-Reading and Research

READING Recommended Pre-Reading for Component 01

You do not need a textbook yet, but the more familiar you are with these topics before September, the easier the first term will feel.

- Read about the structure of the heart and the cardiac cycle (systole and diastole)
- Research the three energy systems: ATP-PC, glycolytic (lactate) and aerobic
- Read about Newton's three laws of motion and how they apply to sport
- Look up the difference between 1st, 2nd and 3rd class levers in the human body

Useful websites:

- www.brianmac.co.uk (excellent for exercise physiology and fitness testing)
- www.teachpe.com (clear, exam-focused explanations across all three topics)
- www.s-cool.co.uk/a-level/pe (structured revision-style notes)

Videos to Watch

WATCH YouTube Videos for Component 01

Search for the following titles on YouTube and take notes as you watch.

1. 'The Cardiac Cycle Explained' - look for an animated A Level Biology or PE channel
2. 'The Three Energy Systems for Sport' - search PE-specific channels such as 'PE4life' or 'The PE Umbrella'
3. 'Newton's Laws of Motion in Sport' - several good explainer videos exist applying each law to sporting examples
4. 'Levers in the Human Body' - search for a biomechanics explainer with diagrams of 1st, 2nd and 3rd class levers
5. 'EPOC and Recovery from Exercise' - search for a sports science explainer covering fast and slow components

Notes from Videos:

Summer Tasks (2-5 hours each)

TASK 1: The Body in Action: An Energy Systems Investigation (approx. 3 hours)

Choose a sport you play, watch or are interested in. Research and explain how all three energy systems contribute to performance in that sport at different moments.

Sport chosen: _____

For EACH energy system, complete the following:

Energy System	Type of reaction	Fuel used	ATP yield	Example moment in your sport
ATP-PC				
Glycolytic (Lactate)				
Aerobic				

Now explain, in a paragraph, how the interplay between these systems might change if the intensity or duration of the activity increased. Consider what 'interplay' means - the systems rarely work in complete isolation.

TASK 2: Cardiovascular and Respiratory Systems: Before, During and After (approx. 3 hours)

Using reliable sources, research what happens to the cardiovascular and respiratory systems before exercise (anticipatory rise), during exercise, and during recovery. Complete the table, then answer the questions.

Variable	At rest	During exercise	During recovery
Heart rate			
Stroke volume			
Cardiac output			
Breathing frequency			
Tidal volume			

1. Using the formula Cardiac Output = Heart Rate x Stroke Volume, calculate the cardiac output of an athlete with a heart rate of 150 bpm and a stroke volume of 120ml.

2. Explain why a trained athlete's heart rate returns to resting levels faster than an untrained person's after the same bout of exercise.

TASK 3: Biomechanics in Your Sport: Forces, Levers and Projectiles (approx. 4 hours)

This task asks you to apply biomechanical principles to a sporting example of your choice. Choose a single sporting action (e.g. a tennis serve, a long jump take-off, a rugby tackle, a basketball free throw).

Sporting action chosen: _____

1. Identify which of Newton's three laws of motion is most clearly demonstrated in this action, and explain how.

2. Draw a simple free body diagram showing the main forces acting on the performer or object during this action (weight, reaction, friction, air resistance as relevant). You can draw this by hand on paper and attach it, or describe it in words below.

3. If your chosen action involves a projectile (a ball, javelin, shuttle etc.), explain how the angle of release, speed of release and height of release would affect the distance travelled.

4. Identify a lever system used in your chosen action (e.g. the elbow extending in a serve). State whether it is a 1st, 2nd or 3rd class lever and identify the fulcrum, load and effort.

TASK 4: Training Methods and Programme Design (approx. 3 hours)

Design an outline 4-week training programme to develop ONE component of fitness (aerobic capacity, strength or flexibility) for an athlete of your choice. Use the FITT principles framework and include physiological adaptations you would expect to see.

Component of fitness chosen: _____

Athlete/sport: _____

Week	Frequency	Intensity	Time	Type
1				
2				
3				
4				

List THREE physiological adaptations you would expect from this training, and briefly explain how each adaptation would improve performance:

Example Exam Questions

These reflect the style of question you will face in your Component 01 exam. Attempt them after completing the tasks above.

Q1. Identify the muscles responsible for flexion and extension at the elbow joint during a bicep curl exercise. **[3 marks]**

Hint: Think: agonist during the curl (flexion), agonist during the lowering phase (extension)

Q2. Explain the role of the vascular shunt mechanism in redistributing cardiac output during exercise. **[4 marks]**

Hint: Think about vasodilation/vasoconstriction and which tissues need more or less blood during exercise

Q3. Using a practical example, explain how a 2nd class lever provides mechanical advantage in a sporting movement. **[5 marks]**

Hint: Think about the relative positions of fulcrum, load and effort, and what mechanical advantage means in terms of force needed

Q4. Analyse the contribution of the three energy systems during an 800m race, and evaluate how training could be designed to improve a performer's energy system efficiency for this event. **[8 marks]**

Hint: This is a synoptic question linking energy systems AND training methods. Structure your answer in two clear parts.

Component 01 Reflection

Reflection

Of the three sub-topics in this component (anatomy & physiology, exercise physiology, biomechanics), which do you feel most confident about, and why? Which feels most unfamiliar? Biomechanics often involves maths and physics-style thinking that's new to PE students - how do you feel about that aspect specifically?

Component 02: Psychological Factors Affecting Performance

20% of the A Level | 1-Hour Written Exam | 60 Marks

Overview

This component explores how people learn skills, and the psychological factors that influence performance and behaviour in sport. It is split into two topic areas.

Topic Areas	What You'll Cover
• 2.1 Skill acquisition • 2.2 Sports psychology	• How skills are classified, learned, practised, guided and given feedback • Personality, motivation, arousal, anxiety, aggression, group dynamics, leadership and stress management

Key Terms to Know

Key Term	Definition
Open skill	A skill performed in a changing, unpredictable environment (e.g. a tackle in football)
Closed skill	A skill performed in a stable, predictable environment (e.g. a free throw in basketball)
Cognitive stage of learning	The first stage of learning a skill, characterised by trial and error and frequent mistakes
Autonomous stage of learning	The final stage of learning where a skill becomes automatic, requiring little conscious thought
Positive transfer	When a previously learned skill helps the learning of a new skill
Knowledge of results (KR)	Feedback about the outcome of a performance, e.g. whether a shot scored
Knowledge of performance (KP)	Feedback about the quality and technique of a performance, regardless of outcome
Arousal	A state of physiological and psychological activation/readiness, ranging from deep sleep to high excitement
Inverted U theory	A theory suggesting performance improves with arousal up to an optimal point, then declines
Trait anxiety	An individual's general predisposition to perceive situations as threatening
Social facilitation	The effect an audience or co-actors has on performance, which can be positive or negative

SMART goals	A goal-setting framework: Specific, Measurable, Achievable, Recorded, Time-phased
Self-efficacy	An individual's belief in their own ability to succeed in a specific situation or task

Pre-Reading and Research

READING Recommended Pre-Reading for Component 02

This component connects strongly with GCSE Psychology content if you've studied it, but no prior knowledge is assumed.

- Read about the classification of skills (the continua: simple/complex, open/closed, gross/fine etc.)
- Research the stages of learning a new skill: cognitive, associative and autonomous
- Look up the difference between intrinsic and extrinsic motivation in a sporting context
- Read about the Inverted U theory of arousal and how it relates to sporting performance

Useful websites:

- www.brianmac.co.uk/psych.htm (sports psychology specific section)
- www.teachpe.com/sport_psychology (clear theory summaries)
- www.simplypsychology.org (good general background on psychological theories, though not sport-specific)

Videos to Watch

WATCH YouTube Videos for Component 02

Search for the following titles. Sports psychology lends itself well to video explanation - take notes as you go.

6. 'Classification of Skills in PE' - search for a continua-based explainer with sporting examples
7. 'Stages of Learning: Cognitive, Associative, Autonomous' - several PE-specific explainer videos exist
8. 'Inverted U Theory of Arousal' - search for an animated explanation with a graph
9. 'Social Facilitation in Sport' - look for real sporting examples (home advantage, choking under pressure)
10. 'SMART Goal Setting in Sport' - search for a practical explainer applying SMART to a sporting example

Notes from Videos:

Summer Tasks (2-5 hours each)

TASK 5: Classifying and Coaching a Skill (approx. 3 hours)

Choose a sporting skill you know well (e.g. a golf putt, a rugby pass, a swimming stroke). Classify it using each of the continua below, justifying your placement, then design a short practice session to teach it to a beginner.

Skill chosen: _____

Continuum	Where does your skill sit?	Justification
Difficulty (simple/complex)		
Environmental influence (open/closed)		
Pacing (self-paced/externally paced)		
Muscular involvement (gross/fine)		
Continuity (discrete/serial/continuous)		

Now, design a short practice plan for teaching this skill to a complete beginner. Decide which TYPE OF PRACTICE you would use (e.g. whole, part, massed, distributed) and justify your choice based on the skill's classification above.

TASK 6: Arousal, Anxiety and Performance: A Case Study (approx. 3 hours)

Think of a real sporting moment (from your own experience, a professional athlete, or a famous sporting event) where arousal or anxiety clearly affected performance - either positively or negatively. Research the relevant theory and apply it.

Sporting moment chosen: _____

1. Describe what happened and how arousal/anxiety appeared to affect the performance.

2. Apply the Inverted U theory to this example. Was the performer's arousal too low, optimal, or too high? Explain your reasoning.

3. Suggest TWO stress management techniques (cognitive or somatic) that could have helped this performer, and explain how each would work.

TASK 7: Leadership and Team Dynamics Investigation (approx. 3 hours)

Research a sports team or club you follow, play for, or are interested in. Investigate its leadership and team dynamics, then apply sports psychology theory to what you find.

Team/club chosen: _____

1. Identify the team's main leader (coach, captain or manager) and describe their leadership style (autocratic, democratic or laissez-faire), giving evidence for your judgement.

2. Using Tuckman's stages of group development (forming, storming, norming, performing), identify what stage you think this team is currently at and explain why.

3. Research the Ringelmann effect and social loafing. Do you think this could be a risk for your chosen team? Explain your answer with reference to team size and individual roles.

Example Exam Questions

Q5. Identify two characteristics of a skill classified as 'open' and give a sporting example. **[3 marks]**

Hint: Think about unpredictability, externally-paced timing and changing environments

Q6. Explain the difference between knowledge of results and knowledge of performance feedback, using a sporting example for each. **[4 marks]**

Hint: KR = outcome, KP = technique/quality

Q7. Using Vealey's model of sports confidence, explain how a coach could help build a young performer's confidence before a major competition. **[6 marks]**

Hint: Think about trait sports confidence, competitive orientation and state sports confidence, and link to practical coaching strategies

Q8. Evaluate the effectiveness of different leadership styles for managing a team through Tuckman's stages of group development. **[8 marks]**

Hint: Synoptic question - link leadership styles AND group dynamics theory together across the full answer

Component 02 Reflection

Reflection

Sports psychology often draws on your own experiences as a performer. Which topic in this component do you find most relatable to your own sporting life? Which theory did you find hardest to understand, and what would help you grasp it better?

Component 03: Socio-Cultural Issues in Physical Activity and Sport

20% of the A Level | 1-Hour Written Exam | 60 Marks

Overview

This component explores how sport has developed historically and the contemporary issues affecting it today, including commercialisation, ethics, technology and the media. It is the most discussion-based and current-affairs-linked of the three theory components.

Topic Areas

- 3.1 Sport and society
- 3.2 Contemporary issues in physical activity and sport

What You'll Cover

- The evolution of sport from pre-industrial Britain to today, and global sporting events
- Drugs, violence, gambling, commercialisation, the media, routes to excellence and technology in sport

Key Terms to Know

Key Term	Definition
Amateurism	Participation in sport without payment, historically associated with the upper classes
Professionalism	Participation in sport for financial payment as the performer's main occupation
Globalisation of sport	The increasing interconnectedness of sport worldwide through media, migration of performers and commerce
Commercialisation	The process by which sport becomes driven by commercial (financial) interests
The golden triangle	The interdependent relationship between sport, sponsorship and the media
Ergogenic aids / doping	Substances or methods used to enhance performance, some of which are illegal under sporting rules
Talent identification	The process of recognising potential elite performers, often at a young age, for development pathways
UK Sport	The organisation responsible for funding and developing elite sport in the UK
Terrestrial / satellite TV	Different forms of television broadcast - free-to-air versus subscription-based - affecting sport coverage and access
Match fixing	The illegal manipulation of a sporting contest's outcome, often linked to gambling

Social loafing	Reduced individual effort within a group, particularly relevant in commercialised, high-pressure team contexts

Pre-Reading and Research

READING Recommended Pre-Reading for Component 03

This component connects strongly to current events, so following sports news over the summer will genuinely help.

- Read about how the Industrial Revolution changed participation in sport in Britain (think: factories, railways, public schools)
- Research the history and aims of the modern Olympic Games, including political controversies (e.g. Berlin 1936, Mexico City 1968)
- Read a recent news article about doping, match-fixing or commercialisation in any sport
- Look up the role of UK Sport and how talent pathways work in this country

Useful websites:

- www.bbc.co.uk/sport (for current sporting issues and news)
- www.uksport.gov.uk (to understand routes to sporting excellence)
- www.teachpe.com/sport_sociology (theory summaries specific to this component)

Videos to Watch

WATCH YouTube Videos for Component 03

This component lends itself well to documentaries and news features. Search for the following.

11. 'History of the Modern Olympic Games' - search for a documentary-style overview covering key controversies
12. '1968 Mexico City Black Power Salute' - search for footage and analysis of this iconic protest
13. 'How Sponsorship Works in Sport' - search for an explainer on the commercial side of professional sport
14. 'Doping in Sport Explained' - search for a balanced documentary-style explainer (BBC or similar)
15. Search for any recent (last 12 months) news report on a major sporting controversy - drugs, violence, gambling or technology

Notes from Videos:

Summer Tasks (2-5 hours each)

TASK 8: Sport Through Time: A Case Study (approx. 4 hours)

Choose ONE sport (e.g. football, cricket, tennis, athletics) and trace how it has changed from pre-industrial Britain through to the 21st century. Use the table to record your findings.

Sport chosen: _____

Time period	Who played it & why	Rules/organisation	Key changes from previous era
Pre-industrial Britain			
Post-1850 Industrial Britain			
20th century Britain			
21st century (today)			

Based on your research, identify which factor (social class, gender, law and order, transport, money, time or globalisation) you think has had the BIGGEST impact on your chosen sport's development. Justify your answer.

TASK 9: Commercialisation and the Media: Investigating the Golden Triangle (approx. 3 hours)

Choose a major sporting event or competition (e.g. the Premier League, the Olympics, Wimbledon, the Super Bowl). Investigate how sport, sponsorship and the media interact - the 'golden triangle' - for your chosen example.

Event/competition chosen: _____

1. Identify the main broadcasters who show this event (terrestrial, satellite, pay-per-view, streaming) and how this has changed over time.

2. Identify at least THREE major sponsors associated with this event and explain what each gets in return for their investment.

3. Evaluate TWO positive and TWO negative impacts of commercialisation on this sport, considering performers, spectators and the sport itself.

TASK 10: Technology in Sport: For and Against (approx. 3 hours)

Research ONE significant use of technology in modern sport (e.g. VAR in football, Hawk-Eye in tennis/cricket, goal-line technology, biomechanical analysis tools, wearable GPS trackers). Build a balanced case for and against its use.

Technology chosen: _____

Arguments FOR this technology:	**Arguments AGAINST this technology:**

Considering fair outcomes, entertainment value and participation, write a short balanced conclusion (4-6 sentences) on whether you think this technology has been good for the sport overall.

Example Exam Questions

Q9. Identify three factors that affected participation in sport in pre-industrial Britain. **[3 marks]**

Hint: Think: social class, time, money, transport, law and order, education

Q10. Explain the positive and negative impacts of hosting a global sporting event such as the Olympic Games on the host city. **[4 marks]**

Hint: Consider sporting, social, economic and political impacts - both positive and negative

Q11. Discuss the reasons why elite performers might choose to use illegal drugs or doping methods, and evaluate the strategies used to prevent this. **[6 marks]**

Hint: Cover motivations (e.g. pressure, financial reward) and then evaluate prevention strategies (e.g. testing, education, sanctions)

Q12. Evaluate the extent to which modern technology has improved fair outcomes in sport, using specific examples to support your answer. **[8 marks]**

Hint: Consider both the positives (accuracy, accountability) and limitations (cost, access, pressure on officials) of technology

Component 03 Reflection

Reflection

This component asks you to engage critically with sport as it appears in the news. Which contemporary issue in sport do you find most interesting or important right now, and why? How confident do you feel discussing sport historically compared to discussing it as a current issue?

A Note on Your Non-Exam Assessment (NEA)

Components 05 and 06 | 30% of your A Level combined

What is the NEA?

Alongside the three written exams, 30% of your A Level grade comes from practical, non-exam assessment. This is split into two separate components.

Component	What it involves
05: Practical Performances	You will be assessed performing OR coaching one activity taken from OCR's approved activities list. This is moderated by a visiting moderator.
06: Evaluating and Analysing Performance for Improvement (EAPI)	You will observe a live or recorded performance by a peer in one activity and give an oral response analysing and critically evaluating it. This is externally moderated.

WHAT YOU CAN DO OVER SUMMER Getting ready for your practical assessment

- Think about which sporting activity you are most likely to be assessed in as a performer or coach - this is usually something you already play to a good standard
- Keep playing, training or coaching in your chosen activity over the summer to maintain and build your skill level
- Start thinking about a second activity you could comfortably analyse and evaluate for Component 06 - it does not have to be the same activity you perform
- If you coach, referee, or umpire anywhere, keep a note of this experience - it may be useful evidence later in the course
- Your teachers will confirm the full approved activities list and assessment process in September - this is just to get you thinking ahead

Final Reflection and Goals for September

Setting yourself up for success on your A Level PE course

Overall Reflection

You have now worked through all three theory components. Before you arrive in September, take time to reflect honestly on your readiness and set yourself some clear goals.

Component	Confidence (1-5)	Most confident topic	Least confident topic	Action before September
01: Physiological factors				
02: Psychological factors				
03: Socio-cultural issues				

Reflection

What are your THREE main goals for your first term studying A Level PE? Think about academic targets, your practical performance, and how you want to approach independent study and revision.

Reflection

This A Level requires confident use of technical vocabulary, extended writing and the ability to apply theory to practical examples. Which of these skills do you most want to develop, and how will you go about it?

WHAT TO BRING ON YOUR FIRST DAY Be prepared from the start

- **This completed workbook**
- A ring binder or folder dedicated to A Level PE, ideally with dividers for each component
- Pens, highlighters and a pencil
- A scientific calculator (you will need this for biomechanics calculations)

- Suitable kit for any practical lessons, as advised by your teacher

We look forward to meeting you in September. A Level PE is a genuinely fascinating subject that blends science, psychology and sociology with practical sporting performance. The summer work in this booklet will give you a real head start - well done for getting stuck in.