



DURHAM JOHNSTON
COMPREHENSIVE SCHOOL
— DARE TO BE WISE —

A LEVEL PHYSICAL EDUCATION: Bridging Booklet



Name: _____

Submission Deadline:

Sport & fitness is a huge industry... and you can be part of it. If you're keen on sport you can make a healthy living from your passion. From professional sport through to amateur teams and individuals who just want to get in shape, sport and fitness is a fast-growing business. This course leads nicely into higher education and best of all, you could be in a career doing something that you love.

PRE-A LEVEL AQA PE COURSE MATERIALS & NOTES

Course Outline:

In Year 1, students will be expected to identify and discuss in detail the main factors that affect **participation** in physical activity and sport.

In Year 2, students will develop their knowledge to analyse and evaluate the factors that affect **optimal performance** in physical activity and sport.

Assessment:

Paper 1: 105 marks 35% of A level

1. Applied anatomy and physiology
2. Skill acquisition
3. Sport and society

Paper 2: 105 marks 35% of A level

4. Exercise physiology
5. Biomechanical movement
6. Sport psychology
7. Sport and society and the role of technology in physical activity and sport

Non examined assessment: 90 marks 30% A level

Course delivery:

There are 14 Physiology, 19 Psychology and 12 Sociology areas of study and each one will be assessed with a formal end of unit test using recent past paper questions. Students will also be expected to review and evaluate each topic and explain how it may negatively impact performance describing any measures that can be put in place to correct the cause of these weaknesses.

You should be able to apply knowledge gained from GCSE PE along with research to enable you to complete the following tasks.

Task 1: Follow the link below and download (**do not print**) a copy of the specification. Find the sport that you wish to be assessed in for your practical performance and **identify and write down the core skills for that activity**.

RAG rate the skills for which skills you are competent at and which need development.

<http://www.aqa.org.uk/subjects/physical-education/as-and-a-level/physical-education-7582>

Task 2: Follow the link below and **print off for your file a list of the command words** that will need to be familiar with in preparation for the course.

<https://www.aqa.org.uk/resources/physical-education-and-sport/as-and-a-level/physical-education/teach/command-words>

Task 3: Follow the link below, **print out the subject specific vocabulary** with definitions using a separate page **for the three areas of study**. These will be used throughout the course and highlighted in your work to demonstrate your depth of knowledge and understanding.

<http://www.aqa.org.uk/resources/physical-education-and-sport/as-and-a-level/physical-education/teach/subject-specific-vocabulary>

Task 4: Use the exam paper at the end of this document and read each question carefully. For each question **B**ox the command word, **U**nderline the topic and **G**o back and highlight the sport/context.

Task 5: Look carefully at the documentaries, podcasts and journals and use your time away from school to engage with as many as possible that you have access to.

Important dates:

Term 1 – Initial practical evidence for the practical performer to be submitted.

Year 2 - Moderation will take place between February and April .

Final Exams will take place in June.

Wider engagement in Physical Education

For all A Level Physical Education students it is also recommended that they actively seek to watch some of the many exceptional sporting documentaries that can be found on YouTube, Netflix, Amazon Prime or other online platforms. Recommendations include, but are not limited to:

Highlight the titles when you have watched, listened to and/read them

Documentaries

Title	Where to watch it	What it's about?
The Dawn Wall	Netflix	Legendary free climber Tommy Caldwell tries to get over heartbreak by scaling the Dawn Wall of El Capitan in Yosemite National Park.
Free Solo	All 4	Professional rock climber Alex Honnold attempts to conquer the first free solo climb of famed El Capitan's 900-metre vertical rock face at Yosemite National Park.
Icarus	Netflix	When filmmaker Bryan Fogel sets out to uncover the truth about doping in sports, a chance meeting with a Russian scientist transforms his story from a personal experiment into a geopolitical thriller.
The Class of '92	YouTube	Cinematic documentary examining the rise to prominence and global sporting superstardom of six supremely talented young Manchester United footballers - David Beckham, Nicky Butt, Ryan Giggs, Phil Neville, Paul Scholes and Gary Neville.
Sunderland 'Till I Die	Netflix	The English city of Sunderland has seen its main industries of shipbuilding and mining fall by the wayside, which means the Sunderland Association Football Club -- SAFC -- has become an increasingly more important part of the lifeblood of the unique city.
Pumping Iron	Netflix	This partly real and partly scripted film documents what many consider to be the golden age of bodybuilding that occurred in the 1970s.

Title	Where to watch it	What it's about?
Iron Cowboy	Amazon Prime	The Story of the 50.50.50 Triathlon is the true story James Lawrence's (aka the Iron Cowboy) herculean 50-day journey to complete 50 Ironman distances in 50 consecutive days in all 50 states as he redefines the limits of what is humanly possible.
Eliud	YouTube	Our short film from inside Eliud Kipchoge's training camp, that explores the philosophies that have made him the greatest marathon runner of all time.
The Man With The Halo	YouTube	The Man with the Halo – A story of bravery and determination in the face of adversity.
Nike: Breaking 2	YouTube	Breaking2 was a project by Nike to break the two-hour barrier for the marathon.
Kissed by God	Amazon Prime	Three-time world champion surfer Andy Irons quietly battled bipolar disorder and opioid addiction throughout his life - demons that millions of others combat daily. His previously untold story tears down myths associated with the diseases.
The Edge	Amazon Prime	Between 2009 and 2013, the England Test cricket team rose from the depths of the rankings to become the first and only English side to reach world number one (since ICC records began). The Edge is a compelling, funny and emotional insight into a band of brothers' rise to the top, their unmatched achievements and the huge toll it would take.
Breaking 60	Amazon Prime	Exploring the world of extreme running, as athletes take on the Hong Kong Four Trails challenge and attempt to complete all 298km in 60 hours. The challenge spans the entire width of Hong Kong, and is equivalent to seven marathons back-to-back.
Game Changers	Netflix	James Wilks travels the world on a quest for the truth about meat, protein, and strength. Showcasing elite athletes, special ops soldiers, and visionary scientists to change the way people eat and live.

Title	Where to watch it	What it's about?
The Test	Amazon Prime	The Test: A New Era for Australia's Team, is a docuseries following the Australian Men's Cricket Team, offering a behind-the-scenes look at how one of the world's best cricket teams fell from grace and was forced to reclaim their title and integrity.
Tyson - The Movie	Amazon Prime	Through a mix of interviews and archive film, the legendary boxer reveals his rollercoaster life. The film takes us from Tyson's early days in Brooklyn through his meteoric boxing career and subsequent lost fortune. We see a complex man, destroyed by his own hubris - a modern-day Greek tragedy.
All or Nothing Manchester City	Amazon Prime	In this ground-breaking docu-series, follow Manchester City behind the scenes throughout their Premier League winning, record-breaking '17-18 season. Get an exclusive look into one of the best global sports clubs, including never-before-seen dressing room footage with legendary coach Pep Guardiola, and delve into the players' lives off and on the pitch.
The English Game	Netflix	Two 19th-century footballers on opposite sides of a class divide navigate professional and personal turmoil to change the game — and England — forever.
All or Nothing Brazil National Team	Amazon Prime	The Brazilian National Team goes on a journey of faith, brotherhood, and hard work to reimagine their identity and to re-engage a disgruntled fanbase as they attempt to win the 2019 Copa América on home soil. From the locker room, through the trainings, to the games, we go exclusively behind-the-scenes with the world's most famous football team.
Michael Johnson: Survival of the Fastest	YouTube	Olympian Michael Johnson makes a personal genealogical and scientific journey to discover if African American and Caribbean athletes are successful as a result of slavery

Podcasts

Title	Where to find it	What it's about?
The Science of Sport Podcast	Apple Android	<p>World-renowned sports scientist Professor Ross Tucker and veteran sports journalist Mike Finch break down the myths, practices and controversies from the world of sport. From athletics to rugby, soccer, cycling and more, the two delve into the most recent research, unearth lessons from the pros and host exclusive interviews with some of the world's leading sporting experts. For those who love sport.</p> <p>Stand out episodes:</p> <ul style="list-style-type: none"> • 26/02/20 - The Science of Perfect Training • 08/02/20 - The Shoe That Broke Running II • 25/11/19 - Mary Cain & RED-S • 23/10/19 - The Shoe That Broke Running • 23/09/19 - Why the All Black Are The Greatest Sports Team • 09/09/19 - How to Cheat at Sport and Get Away With It • 27/08/19 - How to Make a Champion (Part II) • 13/08/19 - How to Make a Champion (Part I) • 09/07/19 - The Drugs In Sport Episode • 18/08/19 - The Science of Cricket with Gary Kirsten • 29/04/19 - Caster Semenya: Explaining Sex v Gender

Title	Where to find it	What it's about?
That Triathlon Show	Apple Android	<p>The one triathlon show focusing on practical and actionable advice that you can use in your own triathlon training and racing. New episodes are released twice per week. Includes some excellent discussions on the science of training.</p> <p>Stand out episodes:</p> <ul style="list-style-type: none"> • 06/02/20 - Hill repeats and long runs; Protein for endurance • 27/01/20 - Race hydration, calories and sodium • 06/01/20 - Volume, intensity and physiological adaptations • 18/11/19 - Nutrition trends and current evidence • 24/10/19 - Fueling workouts; Diet and body types • 14/10/19 - Improve your running speed, endurance and performance • 03/10/19 - Aerobic and anaerobic capacity • 19/09/19 - Does compression clothing improve performance and recovery

Title	Where to find it	What it's about?
The Clean Sport Collective	Apple Android	<p>The Clean Sport Collective is a community of powerful voices comprised of athletes, brands, events, clubs, fans and the public to support the pursuit of clean sport and athletics through the absence of performance enhancing drugs.</p> <p>Stand out episodes:</p> <ul style="list-style-type: none"> • 01/02/20 - New Shoe Regulations with Ross Tucker • 26/01/20 - Evan Dunfee - Bronze Medalist in 50km walk • 05/01/20 - Steve Magness, Nike Oregon Project Whistleblower • 17/11/19 - Mary Cain Tells Us Her Story • 20/10/19 - Tyler Hamilton: Convicted Doper and Whistleblower • 07/10/19 - Kara and Adam Goucher on the 4-Year Bans • 31/05/19 - Travis Tygart, CEO of USADA

Books, articles and journals

Title	Where to find it	What it's about?
Touching The Void by Joe Simpson (1988)	Amazon	Simpson's harrowing account of his and Simon Yates's calamitous assault, in 1985, on Siula Grande, Peru, has rightly transcended the sport of climbing and become a legendary fable for what humans are capable of doing to survive. It centres, of course, on one of the most amazing escapes ever achieved: with Simpson hopelessly hanging off one end of a rope, Yates is faced with cutting it to prevent them both being killed. Somehow, Simpson survives the fall. But alone in a crevasse with a shattered leg, his situation is hopeless. What follows is a staggering tale of will and courage that also addresses the perennial question of what drives people to climb mountains in the first place. As Churchill said: "When you're going through hell, keep going".
SSN exercise & sports nutrition review update: research & recommendations	https://jissn.biomedcentral.com/track/pdf/10.1186/s12970-018-0242-y	This paper is an ongoing update of the sports nutrition review article originally published as the lead paper to launch the Journal of the International Society of Sports Nutrition in 2004 and updated in 2010. It presents a well referenced overview of the current state of the science related to optimization of training and performance enhancement through exercise training and nutrition. Notably, due to the accelerated pace and size at which the literature base in this research area grows, the topics discussed will focus on muscle hypertrophy and performance enhancement. As such, this paper provides an overview of: 1.) How ergogenic aids and dietary supplements are defined in terms of governmental regulation and oversight; 2.) How dietary supplements are legally regulated in the United States; 3.) How to evaluate the scientific merit of nutritional supplements; 4.) General nutritional strategies to optimize performance and enhance recovery; and, 5.) An overview of our current understanding of nutritional approaches to augment skeletal muscle hypertrophy and the potential ergogenic value of various dietary and supplemental approaches.

Title	Where to find it	What it's about?
Peak Performance	Amazon	<p>Peak Performance combines the inspiring stories of top performers across a range of capabilities from athletic to intellectual to artistic with the latest scientific insights into the cognitive and neurochemical factors that drive performance in all domains. Peak Performance presents the newly-discovered links that hold promise as performance boosters, but that have been traditionally overlooked. In a concise and relatable manner, Peak Performance explains the strong connection between mind and body and how everyone can apply certain techniques to enhance their own achievements. This book is an entertaining and actionable guide to optimising personal performance that shows readers how to get the most from themselves. Brad Stulberg and Steve Magness highlight great performers across various disciplines including Olympic marathoner Meb Keflezighi, three-time Grammy Award winner Don Was, and renowned mathematician David Goss. This book discusses the science and application of each principle of success and concludes with prescriptive techniques. Unlike other performance books that are field-specific, Peak Performance cuts across domains and will attract readers and entrepreneurs involved in diverse pursuits, from athletes to artists, from hobbyists to scientists, from students to business professionals. If you want to take your game to the next level, whatever 'your game' may be, Peak Performance will teach you how.</p>

Task 4: Use the exam paper at the end of this document and read each question carefully. For each question **B**ox the command word, **U**nderline the topic and **G**o back and highlight the sport/context.

Q1.

Which receptor is responsible for detecting a change in blood pressure?

A Baroreceptor

B Chemoreceptor

C Proprioceptor

(Total 1 mark)

Q2.

Which method of estimating energy expenditure involves measuring the production of CO₂ and / or the consumption of O₂?

A Indirect calorimetry

B Lactate sampling

C VO₂ max test

(Total 1 mark)

Q3.

Rational recreation saw the development of early professionalism during the industrial and post-industrial era (1780–1900).

Explain the differences between the gentleman amateur and working-class professional **and** the impact these had on their participation during this time.

(Total 4 marks)

Q4.

Lauren is a 22-year-old member of a local athletics club and has regularly competed in middle distance races since an early age.

Evaluate the impact that socialisation could have had on Lauren's choices and her current involvement in sport.

(Total 8 marks)

Q5.

The table below shows the oxygen content of arterial and venous blood at rest and during intense aerobic exercise.

	Rest		Intense aerobic exercise	
	Arterial blood	Venous blood	Arterial blood	Venous blood
ml O ₂ /100 ml blood	20	15	20	5

Define the term A-VO₂ diff.

(Total 1 mark)

Q6.

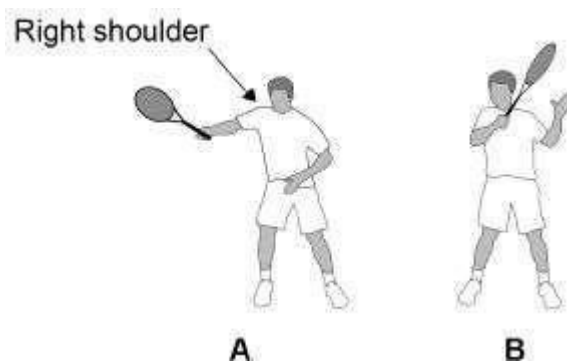
Explain the change in A-VO₂ diff during exercise. Use the data in the table below in your answer.

	Rest		Intense aerobic exercise	
	Arterial blood	Venous blood	Arterial blood	Venous blood
ml O ₂ /100 ml blood	20	15	20	5

(Total 3 marks)

Q7.

The diagram below shows a tennis player performing a forehand stroke.

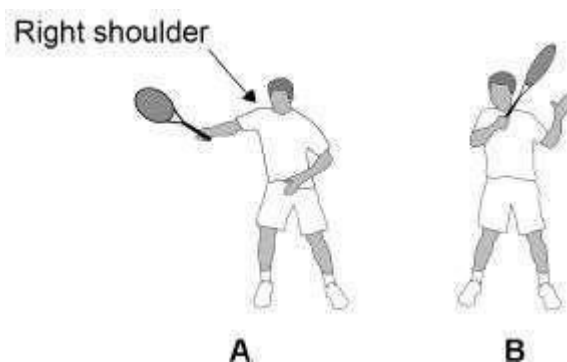


Identify the main agonist, and plane and axis of movement at the right shoulder as the tennis player in the diagram above moves from position **A** to position **B**.

(Total 3 marks)

Q8.

In the diagram below, the main muscle fibre type used for a powerful forehand stroke is fast glycolytic (type IIx).



State **three** characteristics of this muscle fibre type.

(Total 3 marks)

Q9.

The photograph below shows Chris Froome. He is a British cyclist and multiple Tour de France winner.

In 2015 he recorded a VO_2 max score of 84.6 ml / kg / min. An average cyclist would have a VO_2 max score of 40–42 ml / kg / min.



Analyse the factors which explain Chris Froome's higher VO_2 max **and** the effects these factors have on his performance.

(Total 8 marks)

Q10.

Proprioceptive Neuromuscular Facilitation (PNF) is a specialist training method used by a range of athletes.

Explain the role of proprioceptors in PNF **and** evaluate its effectiveness as a specialist training method.

Use sporting examples in your answer.

(Total 15 marks)

Q11.

Baddeley and Hitch devised a model of the working memory.

Which subsystem in this model deals with auditory information from the senses to help produce a memory trace?

- A Episodic buffer
- B Phonological loop
- C Visuospatial sketchpad

(Total 1 mark)

Q12.

Which types of feedback would be most appropriate for a performer in the cognitive stage of learning?

- A Knowledge of performance, negative, intrinsic
- B Knowledge of performance, positive, extrinsic **C**
- Knowledge of results, negative, intrinsic
- D Knowledge of results, positive, extrinsic

(Total 1 mark)

Q13.

Performers need to learn skills in order to take part in physical activity. Skilled movements are learned, economic and consistently successful.

State **three** other characteristics of skill.

(Total 3 marks)

Q14.

Vygotsky 's Social Development Theory is a constructivist theory. Learning is built up in stages based on the current level of performance.

Outline the **three** stages of development in this theory.

Give a sporting example for each stage.

(Total 3 marks)

Q15.

'Verbal guidance is a suitable way of introducing a new skill to a cognitive learner. '

Discuss this statement.

(Total 4 marks)

Q16.

Goalkeepers in hockey need to respond quickly to the actions of the attacking players.

Analyse the factors which will affect a goalkeeper 's response time **and** the strategies a coach can use to help them respond quicker.

(Total 8 marks)

Q17.

Skill classification can be used to place skills onto a range of continua including:

- Simple – Complex
- Discrete – Serial – Continuous
- Self-paced – Externally paced
- High Organisation – Low Organisation.

‘Progressive part practice is suitable for developing a tumbling routine in gymnastics.’

Evaluate this statement, using your knowledge of the continua listed above.

(Total 15 marks)

Q18.

Which of these is a characteristic of the popular recreation available to the lower class in pre-industrial Britain?

- | | |
|--|-----------------------|
| A Local and specific to each community | <input type="radio"/> |
| B Regular | <input type="radio"/> |
| C Rule based | <input type="radio"/> |
| D Skill and tactics based | <input type="radio"/> |

(Total 1 mark)

Q19.

Ethnic minorities may be pushed into certain sports, based on assumptions about them.

What is this an example of?

- | | |
|----------------|-----------------------|
| A Channelling | <input type="radio"/> |
| B Racism | <input type="radio"/> |
| C Stacking | <input type="radio"/> |
| D Stereotyping | <input type="radio"/> |

(Total 1 mark)

Q20.

State **two** social benefits to an individual of increasing their participation in physical activity and / or sport.

(Total 2 marks)

Q21.

Explain **two** benefits of sponsorship to companies investing large amounts of money into sport.

(Total 4 marks)

Q22.

The table below shows the participation data for disabled and non-disabled adults over a 4-year period since the London 2012 Olympic and Paralympic Games.

% participating in 30 minutes of moderate intensity activity at least once per week		
	Non-disabled	Disabled
2012–2013	40.1	19.1
2013–2014	39.8	17.6
2014–2015	39.6	17.2
2015–2016	39.9	16.8

Explain the barriers that disabled athletes face **and** evaluate the effectiveness of the strategies used to overcome these barriers.

Use the data in table above to support your answer.

(Total 15 marks)