

Y12 A Level Physical Education Summer Independent Learning Activity

Your SIL for A Level PE has 3 parts.

Task 1 – Metacognition and Retrieval - This links into the metacognition and revision strategies that you will have been made aware of during your first year at college. It focuses on Exam style questions taken from the specification and will help you prepare for your progression exam in September. There are 2 questions in here which are preview questions and require a little more thought (ie. topics you will cover in September) and require you to research first.

Replay the metacognition videos listed on Cedar to remind yourself of the key content processes associated with metacognition. It is essential that you are familiar with the 'retrieval practice' clip as this is what you will be focusing on in task 1.



and

Retrieval practice · <https://www.youtube.com/watch?v=wrDOoBuP9A8&t=28s>

Task 2 – This is the Preview section. This links into the topics you will be looking at in September. In Paper 1 of your OCR A Level PE Specification you must answer a 20 mark question which links two topics together. This will be our main focus in September, and this will enable you to prepare for September and gain some experience prior to us covering it.

<https://www.ocr.org.uk/Images/234833-specification-accredited-a-level-gce-physical-education-h555.pdf>

Task 3 – Expanding your Subject Knowledge. This section is designed to develop your understanding of sporting context and recent challenges in the sporting world.



Choose 2 Options from the lists and write a report (minimum 1 xA4 on each) which;
(A01) Describes an overview of the Video/Book
(A02) Explains the relationship between the video/book and you're a Level PE Specification including topics from your Programme of Study
(A03) Analyses the video/book and discuss your opinion and conclusion
Tick the boxes of the ones you are completing.
Feel free to watch as many as you want if you have time

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1.A football player will use their knee joint and the quadriceps group of muscles to perform a powerful clearance kick.

Identify **one** of the quadriceps muscles and the type of synovial joint at the knee.

Outline the functional role and type of contraction in the quadriceps muscle during the preparation and execution of the kick.

Physical Education (A level)

Y12 Summer Independent Learning

Chris Davies

Please note that you may see slight differences between this paper and the original.

Candidates answer on the Question paper.

OCR supplied materials:

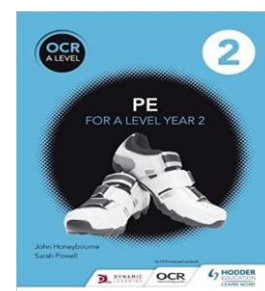
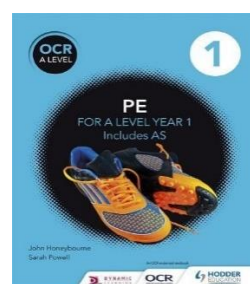
Additional resources may be supplied with this paper.

Other materials required:

- Pencil
- Ruler (cm/mm)

OCR
Oxford Cambridge and RSA

Duration: Approximately 2 hours



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions, unless your teacher tells you otherwise.

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Part 1

1(a).

Fig. 1.1 shows an acrobatic movement in gymnastics.



Fig. 1.1

- i. Complete the table below to identify the movement and agonist muscle at the left and right hip during this skill. **(4)**

	Movement	Agonist
Left hip		
Right hip		

- ii. Classify this skill..... **(1)**

- iii. **Fig. 1.2** shows a discus thrower in action.

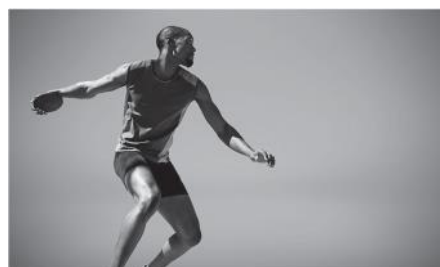


Fig. 1.2

Identify the predominant muscle fibre type used by the discus thrower to achieve maximum distance.

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- iv. Explain how the function of this fibre type suits the performance of a discus throw.

[2]

- (b). i. Describe the nervous stimulation of a motor unit.

[2]

- ii. Describe the frontal and sagittal planes of movement and give a sporting example for each.

Frontal

Sagittal

[4]

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(c). Explain the cardiac cycle of the heart using the following key terms:

- Atrial systole
- Ventricular systole
- Diastole

[3]

(d). An athlete has a tidal volume of 0.5 litres and a breathing frequency of 12 breaths per minute.

- i. Calculate the athlete's minute ventilation using these values. Show your workings.

[2]

- ii. During a 5000 metre race, the athlete's tidal volume increases. Explain how neural control of breathing causes this to happen.

[2]

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- 2(a). Describe intermittent hypoxic training (IHT). Outline **one** benefit and **one** risk of intermittent hypoxic training.

[4]

- (b). An elite marathon runner will have a very high VO_2 max.

- i. Describe how age and gender can affect VO_2 max.

[2]

- ii. Evaluate the importance of a high VO_2 max for an elite footballer.

[3]

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- (c). A gymnast is encouraged to follow a healthy, balanced diet by his coach.
- i. Explain how carbohydrates, vitamins and fibre in the gymnast's diet support training and performance.

[3]

- ii. Assess the possible long term effects on the gymnast if he regularly follows a diet that is high in fat and low in proteins.

[2]

- (d). The three phases of training are named below. Outline what is meant by each phase, and, using sporting examples, describe a specific objective for each phase.

Preparatory

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Competitive

Transition

[6]

3(a). Fig. 3.1 shows a diagram of a middle distance runner in motion.

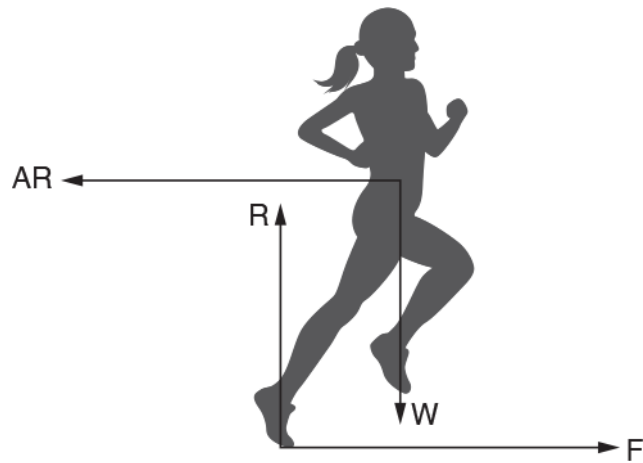


Fig. 3.1

i. Which one of the following is true?
Put a tick (✓) in the box next to the correct answer.

- A. The sprinter is accelerating.
- B. The sprinter is at constant velocity.
- C. The sprinter is decelerating.
- D. The motion of the sprinter cannot be identified.

(1)

iii. Give **one** reason for your answer in (i).

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[1]

(b). State which of Newton's laws of motion is most applicable to each of the following statements.

i. The long jumper who produces the greatest muscular force will have the greatest change in momentum.

[1]

ii. A sprinter at rest in the blocks must apply a large enough force to the blocks to overcome their weight.

[1]

iii. A speed skater achieves constant velocity as they travel round the track.

[1]

(c). A sprinter generates momentum. They have a mass of 70 kg and run at a velocity of 10 m/s.

i. Define and calculate the sprinter's momentum, showing your workings.

[3]

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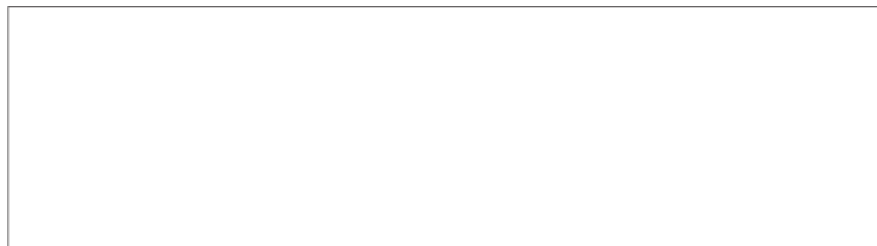
- ii. At what velocity must a 100 kg athlete run to have the same momentum as calculated above?

[1]

- (d). Describe how the force of weight acts on a sporting body. Using examples from sport explain **three** factors affecting air resistance.

[5]

- (e). i. Sketch a second class lever system in the box below, and identify the effort arm and load arm.



- ii. Describe a sporting example of a second class lever system in the human body.

[1]

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- iii. Explain why a second class lever has a mechanical advantage.

[2]

4.



Jogging is a very popular aerobic sporting activity as part of a healthy lifestyle.

Explain the immediate effects of jogging on the vascular system, and evaluate the impact of regular training on lifestyle diseases of the cardiovascular system.

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1(a).

Using practical examples from sport, explain how operant conditioning affects the learning of motor skills.

[4]

(b). i. Define the terms 'positive transfer' and 'negative transfer' in relation to the learning of skills. **(2)**

Positive transfer

Negative transfer

v. Using practical examples from sport, explain ways a coach could optimise the effects of positive transfer. **(2)**

(c). i. State **two** ways in which a coach could help a performer who is in the cognitive stage of learning move on to the associative stage of learning. **(2)**

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- ii. Using practical examples from sport, explain how a performer might know that they have moved on from the associative stage to the autonomous stage of learning. **(3)**
- (d). Discuss the advantages and disadvantages of using intrinsic and extrinsic feedback when performing skills in sport.

[6]

2(a).

Using an example from sport or physical activity, describe the **three** components of attitude.

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[6]

- (b). i. What is meant by 'social inhibition' during sports performance? (1)
- ii. Describe **three** strategies a performer could use to minimise social inhibition. (3)

(c). Evaluate trait and social learning theories of personality formation.

[4]

- (d). i. Identify **three** reasons why a sports performer may set goals. (3)

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- ii. Successful goal setting includes goals that are specific and recorded.

Using a sporting example, explain the **three other** elements of the SMART principle of goal setting. **(3)**

3(a).

- i. 19th century public schools are said to have influenced the development of sport through the 'cult' of athleticism.

What is meant by 'cult' of athleticism? **(1)**

- ii. Describe **three** ways in which former public school boys exported and spread sports from the public schools at home and abroad. **(3)**

- (b).** Sport England has measured the changes in participation in sport and physical activity over a ten year period.

Fig. 1 shows the percentage of men and women aged 16 years and over participating in sport and physical activity once a week.

Year	% participation by men	% participation by women
2005/6	39.4	30.1
2008/9	41.8	31.5

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2012/13	41.4	31.9
2015/16	40.5	31.9

Fig. 1

Referring to the data shown in Fig. 1, analyse possible reasons for the changes in participation rates over this time period.

[6]

- (c). Describe how law and order has shaped the characteristics of sport in the 21st century.

[4]

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- (d). Explain how the Olympic Games of 1936 in Berlin and 1968 in Mexico City were exploited for political reasons.

[6]

4. *Using examples from sport, explain the processes of Bandura's theory of observational learning.

Evaluate the use of extrinsic and intrinsic motivation when learning motor skills.

[10]

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Preview - 20 Mark Questions

Complete the 3 x 20 Mark Exam questions below. These will link in to the start of your Year 13 course where we will look at the structure and organisation of extended answer responses.

You should aim to write at least 1 side of A4 Paper on each Question

1. Define the term flexibility.

Using examples, explain factors that can affect the flexibility of a performer in sport.

Critically evaluate different types of training used to develop flexibility. (20 Marks)

2. Explain factors that affect explosive strength.

Devise a six week training programme to improve explosive strength.

Explain how the programme would improve health and fitness. (20 Marks)

3. An elite marathon runner will have a very high aerobic capacity.

Explain how the aerobic system provides energy during a marathon and how cardiovascular adaptations as a result of an aerobic training programme can enhance aerobic capacity. (20 Marks)

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Expanding Your Subject Knowledge Activity

OCR A LEVEL PHYSICAL EDUCATION
DEVELOP YOUR KNOWLEDGE OF SPORTING CONTEXT IN
PREPARATION FOR YOUR 2 YEAR COURSE



Books to Read

<i>The English Game</i> (Sport and Society)	
<i>Unstoppable</i> (Sport Psychology)	
<i>Icarus</i> (Drugs/Performance)	
<i>Stop at Nothing</i> (Doping in Sport)	
<i>Coach Carter</i> (Sport Psychology)	
<i>The Game Changers</i> (Diet and Nutrition)	
<i>Supersize Me</i> (Diet and Nutrition)	
<i>Blindside</i> (American Football)	
<i>Last Chance U</i> (American Football)	
<i>The Last Dance</i> (Michael Jordan)	
<i>Losers</i> (Adversity in Sport)	
<i>Moneyball</i>	
<i>Formula 1 Drive to Survive</i>	

<i>All or Nothing</i> Manchester City	
<i>All or Nothing</i> New Zealand All Blacks	
<i>This is Football</i>	
<i>4 Minute Mile</i>	
<i>The Program</i> (Lance Armstrong)	
<i>Andy Murray - Resurfacing</i> (Injury Rehabilitation)	
<i>Dan Carter - Perfect</i>	
<i>The Unknown Runner</i>	
<i>The Race to Dope</i> (Doping System in Sport)	
<i>Muscle and Medals</i>	

<i>Subscribe to the Body Coach</i> (Joe Wicks) (Types of Training/Nutrition)	
<i>Kobe Bryant</i> <i>Black Mamba Doc</i>	
<i>Being Serena</i> Series	
<i>"Is Professionalism Killing Sport"</i> BBC Documentary	
<i>The Psychology of a Winner 2020</i> Documentary	
<i>Trent Alexander Arnold</i> <i>Living the Dream</i>	
<i>Tyson Fury</i> <i>Road to Redemption</i>	
<i>Crossing The Line</i> Australian Cricket	
<i>Jurgen Klopp</i> <i>Journey to Top</i>	
<i>Strive for Greatness</i> Lebron James	

Shoe Dog - Phil Knight
History/Story of Nike

Bounce - Matthew Syed
Neuroscience/Psychology

Black box thinking
Matthew Syed
Psychology

Unbeatable - Jessica
Ennis

No Limits - Michael Phelps

My Time - Bradley Wiggins

Between the lines -
Victoria Pendleton

Legacy - James Kerr
All Blacks (New Zealand Rugby)

The Secret Race - Tyler
Hamilton and Daniel Coyle
Drugs/Energy Systems/Deviance

Keep up to date with all the latest news in the world of sport, there is always something happening that links to the course.....

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