Y12-13 A Level PE

Y12 A Level Physical Education Summer Independent Learning Activity

Your SIL for A Level PE has 2 parts.

Task 1 – This is the Preview section (NEA). This links into the topics you will be looking at in September. In September you will be starting your NEA. This will involve completing an EAPI on a Sport of your choice. The assessment criteria for this part of the specification are set out below.

https://www.ocr.org.uk/Images/234840-as-and-a-level-guide-to-non-exam-assessment.pdf

For this part of the specification, you have to observe the performance of a player in a sport of your choice, and complete an analysis of their performance. The analysis must have 2 sections:

Section 1 – What are their strengths and weaknesses in terms of skills, tactics and Fitness?
Section 2 – Design a 12-week Training Plan to improve one major area of weakness

The EAPI should last between 20-30 mins and include as much areas of the prescribed content (content from the Specification you can use for the EAPI). This content is shown on the next page.

Instructions

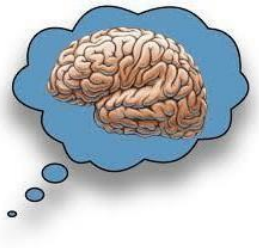
Your preview task is in preparation for Part 2 of the EAPI. You must choose 4 skills that a performer in your sport would need to execute successfully in their performance and create a 12-week training plan on each using the designs on the next pages.

You should complete a training plan for each of your chosen skills. These are available from your class teacher or feel free to make them yourselves.

You need to design drills at each stage of the plan and explain the set up using your knowledge of topics from paper 2.

Task 2 – 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

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Theory	**Evaluative comments**	**Development plan**
Analysis of movement	☐	☐
Muscle fibre types	☐	☐
CV system- effects of different exercise intensities and recovery on heart values	☐	☐
Respiratory system-effects of different exercise intensities and recovery on respiratory values	☐	☐
Energy systems	☐	☐
Ergogenic aids	☐	☐
Aerobic training	☐	☐
Strength training	☐	☐
Flexibility training	☐	☐
Periodisation of training	☐	☐
Newton's laws	☐	☐
Force	☐	☐
Centre of mass and stability	☐	☐
Levers	☐	☐
Fluid mechanics	☐	☐
Factors affecting horizontal distance travelled	☐	☐
Flight paths	☐	☐
Bernoulli's principle	☐	☐
Magnus force	☐	☐
Classification of skill	☐	☐
Types and methods of practice	☐	☐
Theories of learning	☐	☐
Stages of learning	☐	☐
Guidance	☐	☐
Feedback	☐	☐
Personality	☐	☐
Attitude	☐	☐

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Motivation	☐	☐
Arousal	☐	☐
Anxiety	☐	☐
Aggression	☐	☐
Social facilitation	☐	☐
Goal setting	☐	☐
Confidence	☐	☐
Emergence and evolution of modern sport- 21st century	☐	☐
Development of talent identification	☐	☐
The role of schools, clubs. Universities in contributing to elite sporting success	☐	☐
The role of UK Sport and National Institutes in developing sporting excellence	☐	☐
Strategies to address drop out from elite programmes	☐	☐
Technology- impact on participation	☐	☐

Individual Sports

Development Plan Prep Sheet – Individual Sports. Priority Weakness -

Microcycle Focus (3x4 Weeks)	**Technique** *Isolated Drill*	**Progressive Practice** Different Drill. Incorporate Time Limits/Training Aid	**2nd Progressive Practice** Different Drill. Involves Thought Process (Choices when to execute skill)	**Competitive Drill** Development of Skill in a conditioned Environment. Points Scoring vs an opponent/scoring system	**Theory Links**	**Coaching Points**
1 Focus on **Overlearning** Technique in Fixed Environment (Isolated)	Time-	15 mins	Time-15 mins	Time-15 mins		
2 Focus on **developing Technique in different situations** (Thought Process)	Time-	15 mins	Time- 15 mins	Time-15 mins		
3 Drills in **Event Specific Conditions**	Time-	15 mins	Time- 20 mins	Time- 20 mins		

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Team Sports

Development Plan Prep Sheet. Priority Weakness -

Microcycle Focus (4 x 3 Weeks)	**Technique** Isolated Drill	**Progressive Practice** Different Drill. Incorporate Time Limit/Partner. Increase challenge	**Phase of Play** Developing Skill in a developed Practice.	**Competitive Drill** Not a Full-Sided Game. Scoring System in Place	**Theory Links**	**Coaching Points**
1 **Overlearn** Technique in Fixed Environment (No Opposition)	Time	15 mins	Time-15 mins	Time-15 mins		
2 Introduce **Opposition**	Time-	15 mins	Time-15 mins	Time-15 mins		
3 **Small Sided games**	Time-	15 mins	Time-15 mins	Time-15 mins		
4 **Conditioned** games	Time-	15 Mins	Time-20 mins	Time-20 mins		

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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.

[1]

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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.

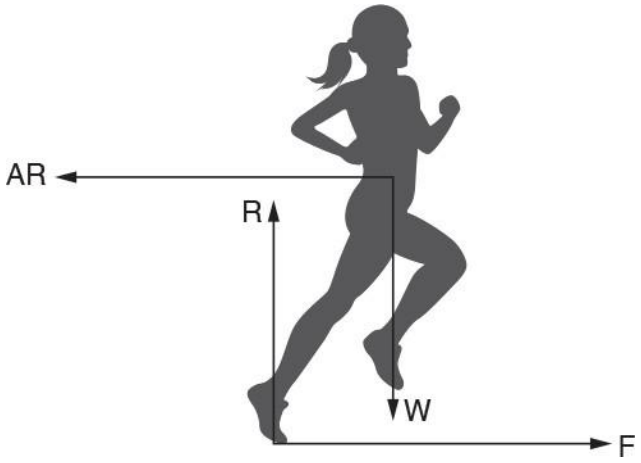

Fig. 3.1

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]

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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[10]

END OF Part 1

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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)**

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

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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Review - 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)