The Appleton School

KS4 PE

AQA

PAPER 1: THE HUMAN BODY AND MOVEMENT IN PHYSICAL ACTIVITY AND SPORT

PERSONAL LEARNING CHECKLISTS

2022

PE – Paper 1: The human body and movement in physical activity and sport

RAG Rate each section in the first column

Red = Not at all confident – needs major revision focus, Amber = requires more revision until confident. Green = Confident.

Use remaining columns to colour code when you have revised and tested your knowledge and understanding over several weeks.

Key Idea	**Key Knowledge to understand**	**RAG**					
3.1.1: Applied anatomy and physiology							
3.1.1.1: The structure and functions of the musculoskeletal system	Identify main bones and their locations.						
	Know the structure of the skeleton and how it provides a framework for movement, (in conjunction with the muscular system).						
	Know the functions of the skeleton and apply them to performance in physical activity. Functions of short long flat bones.						
	Identify main muscles of the body. Remember rotator cuffs, anterior tibialis. Know the role of tendons.						
	Identify the structure of a synovial joint and how they prevent injury						
	Know types of freely moveable joints and how they can differ to allow certain types of movement. Limited to Elbow and Knee and ankle- Hinge and shoulder and hip- Ball and socket.						
	Explain how major muscle groups work antagonistically on major joints.						
	Know the terms isometric isotonic concentric and eccentric.						
3.1.1.2: The structure and functions of the cardio-respiratory system	Know the pathway of air from mouth/nose to the alveoli.						
	Explain how gaseous exchange takes place and the features that assist gaseous exchange						
	Identify blood vessels and their structure.						
	Identify the structure of the heart and explain the cardiac cycle.						
	Define terms related to the heart and its actions. Systole, diastole, vasoconstriction, vasodilation,						

	cardiac output, stroke volume, heart rate.						
	Identify volumes on a spirometer trace and understand how they may change from rest to exercise. Residual volume, inspiratory reserve volume, expiratory reserve volume tidal volume.						
	Know the mechanics of breathing – the interaction of the intercostal muscles, sternocleidomastoid and pectorals ribs and diaphragm in breathing.						
3.1.1.3: Anaerobic and aerobic exercise	Explain the terms anaerobic and aerobic exercise. Be able to write the word equations for both of these						
	Link practical examples of sporting situations to aerobic or anaerobic exercise.						
	Define the term EPOC (Excess post-exercise consumption) and understand that oxygen debit is a result of muscles respiring anaerobically during vigorous exercise and producing lactic acid.						
	Explain the recovery process from vigorous exercise. Cool down, rehydration, carbohydrates, ice baths						
3.1.1.4: The short and long term effects of exercise	Understand the immediate effects of exercise. Hot sweaty red skin Increase in breathing depth Increased heart rate						
	Short-term effects (24 to 36 hours) of exercise on the body. Tiredness, light headed, nausea, aching and DOMS						
	Understand the long-term effects of exercise (months and years of exercising) on the body. Body shape may change, improvement in specific fitness, builds muscle strength, improve speed, cardiovascular fitness, improved stamina, increased heart size and lower resting heart rate.						
3.1.2: Movement analysis							
3.1.2.1: Lever systems, examples of their use in activity and the	Identify and draft first, second and third class lever systems						

mechanical advantage they provide in movement	within sporting examples and be able to locate the fulcrum on each one.						
	Understand the mechanical advantage of each within sporting examples.						
	Analysis of basic movements in sporting examples. Flexion extension adduction abduction planta flexion dorsi flexion rotation.						
	Link movements to sporting examples. Elbow action in press ups, football throw, Hip, knee and ankle action in running kicking squats and vertical jump Should action in bowling						
	Identification of the relevant planes (frontal, transverse, sagittal) and axes (longitudinal, transverse, sagittal) of movement used whilst performing : front somersault, forward roll ,running 360d degree twist in ice skiing spin, discus Cartwheel						
Topic 3.1.3: Physical training							
3.1.3.1 & 3.1.3.2: The relationship between health & fitness & the role that exercise plays in both – The components of fitness, benefits for sport & how fitness is measured & improved	Define health & fitness & explain the relationship between the two.						
	Define 10 components of fitness & link their use into physical activity.						
	Understand the reasons for & the limitations of, fitness testing.						
	Know the protocols for a test for each component & evaluate the relevance to performers in different sporting activities.						
	Demonstrate the collection of test scores & definitions in the terms of qualitative & quantitative data.						
Topic 3.1.3.3: The principles of training & their application to personal exercise/training programmes	Name and explain in use the principles of training to the acronyms of SPORT & FITT.						
	Apply these principles to sporting examples.						
	Know the training methods, what it involves and the purpose.						

	Circuit continuous Fartlek Interval static weight training Plyometric, high altitude training						
	Know the required threshold, target zones and if aerobic or anaerobic for each method and appreciate the need for rest & recovery.						
	Identify the advantages and disadvantages (the effects on the body) of training types linked to specific aims.						
3.1.3.4: How to optimise training & prevent injury	Calculating intensities to optimise training effectiveness, considering training zone, MHR & types of training.						
	Know the considerations to prevent injury Warm up, issues with over training , appropriate clothing, hydration bracing stretches correct techniques appropriate rest.						
	Know specific training techniques & understand different requirements of training at different times of a season to benefit the performer. The three P's						
3.1.3.5: Effective use of warm up & cool down	Know how & why to warm up/cool down & the benefits to the performer/performance.						
	Know and be able to justify the benefits of warming up and cooling down						
3.1.4: Use of data							
3.1.4.1, 3.1.4.2 & 3.1.4.3: Demonstrate an understanding of how data are collected – both qualitative & quantitative – Present data (including tables & graphs) – Analyse & evaluate data	Know methods of collecting qualitative & quantitative data.						
	Ability to present data graphically.						
	Interpret data in various formats.						