# Scheme of work

Introduction

This Scheme of work offers a route through the A-level Physical Education (7582) course.

It covers the specification in a logical order and suggests possible teaching and learning activities for each section of the specification.

The order is by no means prescriptive and there are many alternative ways in which the content could be organised.

The resources indicate those resources commonly available to schools, and other references that may be helpful. Resources are only given in brief and risk assessments should be carried out.

**Contents**

You can use the title links to jump directly to the different sections of this scheme of work (Use Ctrl and click to follow the link)

|  |  |
| --- | --- |
| Section title | Page |
| **[Applied anatomy and physiology](#appliedanatomy)** | 5 |
| [Cardiovascular system](#cardiovascularsystem) | 5 |
| [Respiratory system](#respiratorysystem) | 12 |
| [Neuromuscular system](#neuromuscularsystem) | 14 |
| [The Musculo-skeletal system and analysis of movement in physical activities](#Musculoskeletalsystem) | 17 |
| [**Skills acquisition**](#skillsacquisition) | 24 |
| [Skill, skills continuums and transfer of skills](#Skillskillscontinuums) | 24 |
| [Impact of skill classification on structure of practice for learning](#Impactofskillclassification) | 26 |
| [Principles and theories of learning and performance](#principlesandtheoriesoflearning) | 27 |
| [Use of guidance and feedback](#Useofguidanceandfeedback) | 31 |
| [Memory models](#memorymodels) | 33 |
| [Efficiency of information processing](#Efficiencyofinformationprocessing) | 35 |
| [**Sport and society**](#sportsandsociety) | 38 |
| [Pre-industrial (pre-1780)](#Preindustrial1780) | 38 |
| [Industrial and post-industrial (1780 - 1900)](#Industrialandpostindustrial1780) | 39 |
| [Post World War II (1950 to present)](#postworldwarII) | 41 |
| [Sociological theory applied to equal opportunities](#sociologicaltheoryappliedtoequalop) | 44 |
| [**Exercise physiology**](#exercisephysiology) | 51 |
| [Diet and nutrition and their effect on physical activity and performance](#dietandnutritioneffectonphysicalactivity) | 51 |
| [Preparation and training methods in relation to maintaining physical activity and performance](#prepandtrainingmethods) | 53 |
| [Injury prevention and the rehabilitation of injury](#injurypreventionand) | 57 |
| Section title | Page |
| [**Biomechanical movement**](#biomechanicalmovement) | 59 |
| [Biomechanical principles](#biomechanicalprinciples) | 59 |
| [Levers](#levers) | 60 |
| [Linear motion](#linearmotion) | 61 |
| [Angular motion](#angularmotion) | 62 |
| [Projectile motion](#projectilemotion) | 63 |
| [Fluid mechanics](#fluidmechanics) | 64 |
| [**Sports psychology**](#sportspsychology) | 65 |
| [Aspects of personality](#Aspectsofpersonality) | 65 |
| [Attitudes](#Attitudes) | 67 |
| [Arousal](#Arousal) | 68 |
| [Anxiety](#anxiety) | 69 |
| [Aggression](#aggression) | 70 |
| [Motivation](#motivation) | 71 |
| [Achievement motivation theory](#Achievementmotivationtheory) | 72 |
| [Social facilitation](#Socialfacilitation) | 73 |
| [Group dynamics](#groupdynamics) | 74 |
| [Importance of goal setting](#Importanceofgoalsetting) | 76 |
| [Attribution theory](#Attributiontheory) | 77 |
| [Self-efficacy and confidence](#selfefficacyandconfidence) | 78 |
| [Leadership](#Leadership) | 80 |
| [Stress management](#stressmanagement) | 81 |
| [**Sport and society and the role of technology in physical activity and sport**](#sportsandsocietytheroleoftech) | 82 |
| [Concepts of physical activity and sport](#Conceptsofphysicalactivityandsport) | 82 |
| Section title | Page |
| [Development of elite performers in sport](#developmentofeliteperformers) | 83 |
| [Ethics in sport](#ethicsinsport) | 85 |
| [Violence in sport](#violenceinsport) | 86 |
| [Drugs in sport](#drugsinsport) | 87 |
| [Sport and the law](#sportsandthelaw) | 89 |
| [Impact of commercialisation on physical activity and sport and the relationship between sport and the media](#impactofcommercialisation) | 90 |
| [The role of technology in physical activity and sport](#theroleoftech) | 92 |

**General Resources**

The following resources may be helpful as you consider this scheme of work:

* [Subject Specific Vocabulary](https://www.aqa.org.uk/subjects/physical-education/a-level/physical-education-7582/teaching-resources)
* [Past Papers and Mark Schemes](https://www.aqa.org.uk/subjects/physical-education/a-level/physical-education-7582/assessment-resources)

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**Applied anatomy and physiology**

**Cardiovascular system**

**Specification content**

Understanding the impact of physical activity and sport on the health and fitness of the individual (heart disease, high blood pressure, effects of cholesterol, stroke etc)

**Learning outcome**

To understand the impact of physical activity and sport on health.

**Learning activity**

Discuss the impact of physical activity and sport on health (British Heart Foundation has some good material for this topic).

**Differentiation and extension**

Explore other health related diseases associated with physical inactivity.

**Resources**

* [Coronary heart disease (NHS)](https://www.nhs.uk/conditions/coronary-heart-disease/)
* [High blood pressure (NHS)](https://www.nhs.uk/conditions/high-blood-pressure-hypertension/)
* [High cholesterol (NHS)](https://www.nhs.uk/conditions/high-cholesterol/)
* [Stroke (NHS)](https://www.nhs.uk/conditions/stroke/)

**Specification content**

Fitness (cardiac output – trained and untrained individuals, maximal and sub-maximal exercise).

**Learning outcome**

To understand the impact of physical activity and sport on fitness.

**Learning activity**

* Recap prior knowledge in relation to definitions for heart rate, stroke volume, cardiac output, systole and diastole.
* Could be done through movement around the room with definitions. Person A reads their definition and person B attempts to state the defined term. Person B reads theirs to person A who attempts to state the defined term. They then move on to someone else.
* Impacts on fitness: use graphs to compare cardiac output for different intensities of exercise and trained and untrained. Discuss reasons for differences.

**Resources**

* [’Cardiac output explained: Heart rate X stroke volume= cardiac output’ (YouTube)](https://www.youtube.com/watch?v=FytdHso7-2I)
* [’Does A Lower Heart Rate Mean You're Fitter? GTN Does Science’ (YouTube’](https://www.youtube.com/watch?v=EamGPN4eeIo)

**Specification content**

The cardiac conduction system

**Learning outcome**

To understand how the heart contracts in relation to the cardiac conduction system.

**Learning activity**

* Teach the cardiac conduction system (SA node, AV node, bundle of His, Purkinje fibres etc).
* Look at the structure of the heart in relation to the conduction system and the order. Use of order cards/images to show the stages of the cardiac cycle in time with the conduction system.

**Differentiation and extension**

Structure of the heart and the cardiac cycle.

**Resources**

* [Heart conducting system article (TeachMe Anatomy)](https://teachmeanatomy.info/thorax/organs/heart/conducting-system/)
* [’Crash Course: The Heart, Part 2 - Heart Throbs: Crash Course Anatomy & Physiology’ (YouTube)](https://www.youtube.com/watch?v=FLBMwcvOaEo&list=PL8dPuuaLjXtOAKed)

**Specification content**

* Look at the hormonal, neural and chemical regulation of responses during physical activity and sport (sympathetic and parasympathetic, carbon dioxide (CO2), anticipatory rise)
* Look at receptors involved in regulation of responses during physical activity (chemoreceptor, proprioceptor and baroreceptor)

**Learning outcome**

To understand the hormonal, neural and chemical regulation of heart rate during exercise.

**Learning activity**

* Recap prior knowledge in relation to cardiac conduction system.
* Show heart rate change on a graph during exercise or get students to wear heart rate monitors and take part in a short exercise period and record heart rate changes.
* Brainstorm changes that occur during exercise eg increase CO2, increase muscle contraction, increase heart rate, stroke volume etc.
* How does your body deal with these factors and cause an increase in heart rate?

**Differentiation and extension**

Explore other changes in the body during physical activity that are regulated by the nervous system.

**Resources**

* [’Control of heart rate: Role of SAN & AVN in the cardiac cycle, Parasympathetic & sympathetic nerves’ (YouTube)](https://www.youtube.com/watch?v=ttBixB_vp8w&t)
* [’Sympathetic Nervous System: Crash Course Anatomy & Physiology’ (YouTube)](https://www.youtube.com/watch?v=0IDgBlCHVsA)
* [’Parasympathetic Nervous System: Crash Course Anatomy & Physiology’ (YouTube)](https://www.youtube.com/watch?v=qqU-VjqjczE&t)

**Specification content**

* The hormonal, neural and chemical regulation of responses during physical activity and sport
* Redistribution of blood (vascular shunting, vasoconstriction and vasodilation)

**Learning outcome**

To know and understand how and why blood redistribution changes in different locations of the body during physical activity and sport.

**Learning activity**

* Study a table of blood flow at rest and during exercise to identify where the changes occur and why.
* Build on prior knowledge of the sympathetic system to teach the redistribution of blood and how it is achieved during physical activity and sport.

**Differentiation and extension**

Research or link to the vasomotor control centre in the medulla oblongata.

**Resources**

* **2019 Paper 1 (Synoptic)** Analyse how cryotherapy aids recovery from exercise by causing the body to redistribute blood flow. (8 marks)
* [Pre-capillary sphincters (Khan Academy)](https://www.khanacademy.org/science/health-and-medicine/circulatory-system/blood-vessels/v/pre-capillary-sphincters#:~:text=Precapillary%20sphincters%20are%20segments%20of,the%20flow%20to%20inactive%20tissues.)

**Specification content**

Transportation of oxygen (haemoglobin, myoglobin, oxyhaemoglobin disassociation curve and Bohr shift)

**Learning outcomes**

* To understand how oxygen is transported.
* To be able to explain the Bohr shift in relation to oxygen transport (haemoglobin and myoglobin) during exercise.

**Learning activity**

* Look at the transport of oxygen in the blood and muscles, and the role of haemoglobin and myoglobin.
* Look at the haemoglobin curve at rest. Introduce students to the Bohr shift and how and why the curve changes during exercise. Ask students to mark points on the graph to show and compare saturation levels. This will help them to understand dissociation.
* Look at the significance of the myoglobin curve.

**Differentiation and extension**

Look at the reasons why more oxygen is released during high temperature/exercise and acidic conditions.

 **Resources**

* [’Oxygen’s surprisingly complex journey through your body’ (YouTube)](https://www.youtube.com/watch?v=GVU_zANtroE)
* [’Haemoglobin (oxygen dissociation curve, Bohr effect, adaptations) A Level Biology’ (YouTube)](https://www.youtube.com/watch?v=wgSUdxrlO8Y)

**Specification content**

Venous return mechanisms, relationship with blood pressure (systolic, diastolic)

**Learning outcomes**

To know the venous return mechanisms.

**Learning activity**

* Recap prior knowledge of blood flow eg how does blood return to the heart? The muscles can’t pump blood like the heart, so how does blood return to the heart from the gastrocnemius for example?
* Look at veins and their structure/characteristics. Link to the venous return mechanisms.
* Look at mechanisms and relationship with blood pressure. Students could take their blood pressure.

**Differentiation and extension**

Pose the questions in preparation for next lesson’s topic on Cardiovascular drift. What happens to your stroke volume if venous return decreases? When might this occur?

**Resources**

* **2020 Paper 1** Analyse how changes in venous return occurring during exercise help performance in aerobic events such as a triathlon. (8 marks)
* [Venous return mechanisms (Hodder Education: PE Review)](https://www.hoddereducation.com/media/Documents/magazine-extras/PE%20Review/PE%20Review%20Vol%2012%20No%203/PEReview12_3_Poster.pdf)

**Specification content**

* Cardiovascular drift
* Starling’s law of the heart

**Learning outcomes**

* To understand what is meant by the term cardiovascular drift and why it occurs during physical activity and sport.
* To understand Starling’s law of the heart.

**Learning activity**

* Recap definition and units for heart rate, stroke volume, cardiac output and the relationship between them.
* Look at Starling’s law of the heart. Relate to a tap being turned at different amounts to fill a water balloon. Just like your heart at rest and during exercise. If the tap is more powerful or turned on more, the balloon will stretch more. Like an elastic band if it has more stretch it will contract with more power, therefore stroke volume will be higher.
* Look at cardiovascular drift using a graph as a visual. They could attempt to see this phenomenon by taking part in steady exercise if the equipment is available.
* Link to Starling’s Law and the content of blood (importance of plasma).

**Differentiation and extension**

Attempt or set up a practical task to see if you can observe the phenomenon.

**Resources**

* [’Frank-Starlings Law Explained’ (YouTube)](https://www.youtube.com/watch?v=l4jxZGlnf0Q)
* [‘Cardiovascular Drift’ (YouTube)](https://www.youtube.com/watch?v=cT8RhaNjd0E)

**Specification content**

* Arterio-venous oxygen difference (A-VO2 diff)
* Variations in response to an exercise session. Variations between trained and untrained individuals, Adaptations to body systems resulting in training effect

**Learning outcome**

* To know what is meant by the term A-VO2 diff.
* To understand how A-VO2 diff varies between trained/untrained individuals and different exercise sessions.
* To know the adaptations that occur to the body systems which account for the variations in A-VO2 diff.

**Learning activity**

* Possible link to gas exchange.
* Recap the role of arteries and veins.
* Introduce arterio-venous oxygen difference (A-VO2 diff) as a term and the units.
* Study diagrams to show variations in trained and untrained, and during exercise sessions of differing intensities.
* Look at adaptations to body systems that occur as a result of training and account for the differences in A-VO2 diff.

**Differentiation and extension**

Link adaptations to the variations in trained and untrained.

**Resources**

* [Arteriovenous oxygen difference (Oxford Reference)](https://www.oxfordreference.com/display/10.1093/oi/authority.20110803095426571%22%20%5Cl%20%22%3A~%3Atext%3DAt%20rest%2C%20the%20average%20arterial%2Cthe%20blood%20by%20active%20muscles.)
* [’Aerobic Adaptations’ (YouTube)](https://www.youtube.com/watch?v=Bg95szPUfMo)

**Respiratory system**

**Specification content**

* Understanding of lung volumes and the impact of and on physical activity and sport (residual volume, expiratory reserve volume, inspiratory reserve volume and tidal volume)
* Minute ventilation

**Learning outcome**

* To be able to define the lung volumes.
* To label a spirometer trace and explain the effects of exercise on volumes and minute ventilation.

**Learning activity**

* Recap of system parts and roles within breathing.
* Show volumes on a spirometer trace and give definitions. Can Students match terms to measures on a graph?
* Match up lung volumes and minute ventilation to definitions.
* Label spirometer trace at rest. Discuss changes to trace during physical activity and sport.

**Differentiation and extension**

Measure own levels of tidal volume using the lung volume bags.

**Resource**

[’Lung Volumes’](https://www.youtube.com/watch?v=xLxy0vfbPFw)[(YouTube)](https://www.youtube.com/watch?v=xLxy0vfbPFw)

**Specification content**

* Gas exchange systems at alveoli and muscles (Oxygen and carbon dioxide)
* Principles of diffusion and partial pressures

**Learning outcome**

* To understand how gases are exchanged at the muscles and the lungs.
* Possible link to A-VO2 diff.

**Learning activity**

* Show an image of capillary locations. What is their function? What occurs here?
* Link back to A-VO2 diff. How does haemoglobin pass the oxygen into the muscles and carbon dioxide into the lungs?

**Differentiation and extension**

To consider why trained athletes are more efficient at this process.

**Resources**

* [’How do lungs work?’ (YouTube: TED-Ed)](https://www.youtube.com/watch?v=8NUxvJS-_0k&t)
* [Myoglobin (Physiopedia)](https://www.physio-pedia.com/Myoglobin)

**Specification content**

The neural and chemical regulation of pulmonary ventilation during physical activity and sport

**Learning outcome**

To understand the neural and chemical regulation of pulmonary ventilation during physical activity and sport.

**Learning activity**

* Recap receptors and neural control systems from cardiovascular system – identifying those which are neural and chemical.
* Complete a learning mat on:
* control of pulmonary ventilation
* respiratory control centre
* phrenic nerve.

**Differentiation and extension**

* Link to the different muscles involved during respiration at rest and exercise.
* Explore passive and active processes.

**Specification content**

Impact of poor lifestyle choices on the respiratory system (eg smoking and oxygen transport)

**Learning outcome**

To understand the impact of smoking on the respiratory system and oxygen transport.

**Learning activity**

Students to research and investigate the impact of smoking on the respiratory system and produce a poster to display their findings.

**Resource**

[’How do cigarettes affect the body?’ (YouTube: TED-Ed)?](https://www.youtube.com/watch?v=Y18Vz51Nkos)

**Neuromuscular system**

**Specification content**

Characteristics and functions of different muscle fibre types for a variety of sporting activities:

* slow twitch (type i)
* fast glycolytic (type iix)
* fast oxidative glycolytic (type iia)

**Learning outcome**

To be able to identify the different types of muscle fibres and their associated characteristics.

**Learning activity**

* Introduce different fibres in relation to their characteristics, functions and the activities they’re used in.
* Watch video [‘Muscle Fibers Explained - Muscle Contraction and Muscle Fiber Anatomy’ (YouTube)](https://www.youtube.com/watch?v=3L9JUfzh66I)
* Match up activity to test understanding. Match the characteristic or function to the fibre type.

**Differentiation and extension**

Look into how fibres may change or adapt with long term training eg how type iix could become more like type iia.

**Resources**

* **2021 Paper 1** Usain Bolt and Mo Farah are both multiple Olympic champions, Usain Bolt in the 100 m and Mo Farah in the 10 000 m. Analyse how the structures of their predominant muscle fibre types differ, producing functional characteristics that impact on their performance. (15 marks)
* [’Colin Jackson's leg biopsy - The Making of Me – BBC’ (YouTube)](https://www.youtube.com/watch?v=j-mHQACvZfc)
* [World champion sprinter has muscle profile built for speed study (Ball State University)](https://www.bsu.edu/news/press-center/archives/2015/7/study-former-sprinter-has-cheetah-like-muscle-makeup%22%20%5Cl%20%22%3A~%3Atext%3DMuscle%20biopsies%20taken%20by%20researchers%2Ctwitch%20population%2C%20including%20the%20super)

**Specification content**

The recruitment of muscle fibres and the frequency of impulses:

* motor units
* spatial summation
* wave summation
* all-or-none law
* tetanic

**Learning outcome**

To understand the recruitment of muscle fibres.

**Learning activity**

* Explore muscle and motor unit structure – link to all-or-none law – once fibres within a unit are stimulated they all contract.
* Using different sporting examples explain how the different required forces are applied using the same muscle groups (larger muscle groups have more motor units).
* Practical opportunity: Ask a student to hold a ‘heavy’ box for you. This process can sometimes deceive us. For instance, when lifting a box that appears to be light, not enough motor units are recruited, and the box cannot be lifted. When trying a second time, the box is easily lifted because this time enough motor units have been recruited. Alternatively, when attempting to lift a box that appears to be heavy (but in fact is not), an explosive movement often occurs, as too many motor units have been recruited for the task.
* Apply sporting examples to summation graphs.

**Resources**

* **2018 AS Paper (Synoptic)** It is important for sprinters to push off the blocks effectively to achieve a fast start. Using Newton’s first and second laws of linear motion and knowledge of the neuromuscular system, analyse how a sprinter is able to achieve a fast start.(8 marks)
* **2020 Paper 2 (Synoptic)** Analyse how the gymnast is able to perform this explosive movement successfully. Refer to Newton’s Laws of linear motion and the recruitment of muscle fibres in your answer. (15 marks)

**Specification content**

* Role of proprioceptors in PNF (proprioceptive neuromuscular facilitation)
* Muscle spindles
* Golgi tendon organ

**Learning outcome**

To understand the role of proprioceptors in PNF ([possibility of teaching this in the next unit with muscles and muscle contractions](file:///K%3A%5CContent%20and%20Resources%5CSubjects%5CPE%5CA-level%5CA-level%20PE%20SOW%5CA%20level%20PE%20SOW%20v1.4.docx#Muscle)).

**Learning activity**

* Give a description of PNF – practical demonstration.
* Introduce the key terms and parts involved in a muscle stretch – muscle spindles and Golgi tendon organ (use images or information worksheet).
* Why is PNF so successful in increasing flexibility?
* Students to create their own instructional video on PNF.

**Resources**

* **Paper 1 2018 (Synoptic)** 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. (15 marks)
* [’The Most Effective Stretching Technique PNF Stretching Explained’ (YouTube)](https://www.youtube.com/watch?v=maBhWtvsUeE)
* [’60 Minute Full Body PNF Flexibility Routine’ (YouTube)](https://www.youtube.com/watch?v=1aiTsZtPoRQ)
* [Muscle spindles (Physiopedia)](https://www.physio-pedia.com/Muscle_Spindles)
* [Golgi tendon organ (Physiopedia)](https://www.physio-pedia.com/Golgi_Tendon_Organ)

**The Musculo-skeletal system and analysis of movement in physical activities**

**Specification content**

Types of joint, articulating bones, main agonists and antagonists, and types of muscle contraction (isotonic (concentric and eccentric), isometric)

**Learning outcome**

* To know the types of joint, articulating bones, main agonists and antagonists at the shoulder, elbow, hip, knee and ankle.

* [Possibility of teaching PNF here as opposed to in the previous unit, as Students will understand agonists and antagonists](file:///K%3A%5C%5CContent%20and%20Resources%5C%5CSubjects%5C%5CPE%5C%5CA-level%5C%5CA-level%20PE%20SOW%5C%5CA%20level%20PE%20SOW%20v1.4.docx%22%20%5Cl%20%22PNF).

**Learning activity**

* Use a blank skeleton to label the types of joint and bones.
* Use a blank muscular diagram to label the muscles. Show image of how muscle is attached to the skeleton via tendons.
* Introduce the role of the agonist and antagonist using examples of the bicep curl. Video clips may help to explain.
* Give a number of sporting movements and ask students to label the different elements eg agonist, articulating bones, joint type etc.
* Ensure images show the variety of muscle contractions for explanations.

**Differentiation and extension**

How does the agonist change depending on the type of contraction?

**Resources**

* [List of skeletal muscles of the human body (Wikipedia)](https://en.wikipedia.org/wiki/List_of_skeletal_muscles_of_the_human_body)
* [Human skeleton diagram and information (Britannica)](https://www.britannica.com/science/human-skeleton)
* [’Easiest Way to Remember Contraction Types: Concentric vs Eccentric vs Isometric’ (YouTube)](https://www.youtube.com/watch?v=gCyNj-Upbe4)

**Specification content**

* Joint actions in the sagittal plane/transverse axis:
	+ shoulder (flexion, extension and hyperextension)
	+ elbow (flexion and extension)
	+ hip (flexion, extension and hyperextension)
	+ knee (flexion and extension)
	+ ankle (plantar flexion and dorsi flexion)
* Joint actions in the frontal plane/sagittal axis:
* shoulder (adduction and abduction)
* hip (adduction and abduction)
* Joint actions in the transverse plane/longitudinal axis:
* shoulder (horizontal abduction and adduction)
* hip (horizontal abduction and adduction)

**Learning outcomes**

* To understand joint actions.
* To be able to identify the joint actions that occur at the shoulder, elbow, hip, knee and ankle.
* To apply your understanding of joint actions at the shoulder, elbow, hip, knee and ankle, to sporting examples.
* To know the planes and axes of the body.

**Learning activity**

* Recap prior understanding of joint actions using match up cards. Use sporting images for Students to identify actions.
* Introduce planes and axes using diagrams. Students could create their own using plasticine or toilet roll centres and pieces of card (for planes) with straws (for axes).
* Analyse a variety of sporting actions of the shoulder, elbow, hip, knee and ankle, then identify the joint action, articulating bones, main agonists and antagonists.
* Practical opportunity: Ask students to create movement/gymnastic sequences with movements in certain planes and axes – use exercise to check their knowledge.

**Resources**

* [’Planes of Motion and Axes of Rotation (Made Easy)’ (YouTube)](https://www.youtube.com/watch?v=ctdjknHmO08)
* **2020 Paper 1 (Synoptic)** Analyse how the musculo-skeletal and lever systems operating at the knee and ankle of the take-off leg contribute to gaining maximum height in the high jump. (15 marks)

**Energy systems**

**Specification content**

* To understand Aerobic energy systems (glycolysis, kreb/citric acid cycle, beta oxidation, electron transport chain etc)
* To understand Anaerobic energy systems (ATP-PC system, anaerobic glycolytic system etc)
* Consideration for physical activity and sport of different intensities and durations (differences in ATP generation between fast and slow twitch muscle fibre)

**Learning outcomes**

* To understand energy transfer in the body.
* To understand the energy continuum of physical activity.

**Learning activity**

* In classroom practical – repetitive fist clenching and releasing above your head. How long can you continue?
* Link different methods of producing energy to duration and intensity.
* Consider sources of energy production.

**Differentiation and extension**

Research the enzymes involved in creating ATP in these systems.

**Resources**

* [’ATP & Respiration Crash Course Biology’ (YouTube)](https://www.youtube.com/watch?v=00jbG_cfGuQ)
* **2022 Paper 1 (Synoptic)** Each of the following athletes uses a different main energy system to resynthesise ATP during a race:
	+ Athlete A is a 100 m runner
* Athlete B is a 400 m runner
* Athlete C is a marathon runner.

Analyse how each of these athletes could use different dietary supplements or manipulation to optimise their performance in a race. Refer to the relevant energy systems throughout your answer. (15 marks)

**Specification content**

* Anaerobic energy system (ATP-PC system)
* Anaerobic glycolytic system (lactate accumulation, lactate threshold, OBLA, lactate producing capacity and sprint/power performance)

**Learning outcome**

To understand energy transfer during short duration/high intensity exercise.

**Learning activity**

* Discuss ATP-PC systems.
* Look at exothermic/endothermic coupled reaction.
* Discuss the advantages and disadvantages of lactic acid system.
* Identify sporting examples.

**Resources**

* **2019 Paper 1** Wayde van Niekirk set a new world record in the 400 m at the 2016 Summer Olympics in Rio de Janeiro. The table below shows his 50 m split times from the race.

|  |  |
| --- | --- |
| **Distance** |  **Split time (seconds)** |
| 0-50 m | 6.0 |
| 50-100 m | 4.7 |
| 100-150 m | 4.8 |
| 150-200 m | 5.0 |
| 200-250 m | 5.1 |
| 250-300 m | 5.4 |
| 300-350 m | 5.8 |
| 350-400 m | 6.2 |

Analyse the use of the anaerobic energy systems during the 400 m race and their impact on the split times. (15 marks)

* [Lactate threshold (Runner’s World)](https://www.runnersworld.com/uk/training/a41865710/lactate-threshold/)

**Specification content**

Oxygen consumption during recovery excess post-exercise oxygen consumption (EPOC)

**Learning outcome**

To understand excess post-exercise oxygen consumption (EPOC).

**Learning activity**

* Look at short term effects of exercise and explore what happens when we stop.
* Show students EPOC on a graph and highlight key terms.
* Relate the increased oxygen intake to the short term effects of exercise eg higher CO2, increased lactic acid.
* Look at fast and slow phase functions.

**Differentiation and extension**

Why do trained athletes recover quicker?

**Resources**

* [’EPOC – recovery’ (YouTube)](https://www.youtube.com/watch?v=Bjg9sSNjjAs&t)
* **2023 Paper 1** An amateur boxing match consists of three rounds. Each round lasts 3 minutes. There is a 1 minute break between each round. Analyse the role of excess post-exercise oxygen consumption (EPOC) during the match and its impact on the performance of the boxer as the rounds progress. (3 marks)

**Specification content**

VO2 max

**Learning outcome**

To understand the factors affecting VO2 max/aerobic power.

**Learning activity**

Brainstorm which factors (things) affect our ability to use oxygen.

**Differentiation and extension**

Why does increased training increase VO2 max?

**Resources**

* [‘What is a VO2 Max test? Why and how to work out your VO2 Max’ (YouTube)](https://www.youtube.com/watch?v=_opYH7ZTAC0&t)
* [Use the bleep test score calculator to predict VO2 max from your 20 m shuttle run test result (Topend Sports)](https://www.topendsports.com/testing/beepcalc.htm)
* **Paper 1 2018** Analyse the factors which explain Chris Froome’s higher VO2 max and the effects these factors have on his performance. (8 marks)

**Specification content**

* Indirect calorimetry
* Lactate sampling
* VO2 max test
* Respiratory exchange ratio (RER)

**Learning outcome**

To know and understand the measurements of energy expenditure.

**Learning activity**

* Why might a coach want to know which fuel an athlete is using/whether the athlete has produced lactate?
* Research task, or question writing on the topic.

**Resources**

* [Respiratory exchange ratio (RER) article (Topend Sports)](https://www.topendsports.com/testing/respiratory-exchange-ratio.htm)
* [Lactate sampling](https://www.youtube.com/watch?v=dAUSkNxAs84) (YouTube)

**Specification content**

* Altitude training
* High intensity interval training (HIIT)
* Plyometrics
* Speed agility quickness

**Learning outcome**

To know and understand the impact of specialist training methods on energy systems.

**Learning activity**

* Student presentations on each method **or** students to produce an exam paper and mark scheme on this topic – to follow a certain structure (similar to real paper).
* Practical - HIIT - use the Body Coach online for example. Students complete a few exercises to gain understanding and then become the Body Coach for a partner. They design a HIIT for their partner according to their needs and then take them through the HIIT, then swap over roles.
* Plyometrics – discuss application to Sargent Jump test – attempt with a hold between squat and jump and without a pause. This demonstrates the importance of the short amortisation phase.

**Differentiation and extension**

Read articles on training methods such as altitude and evaluate effectiveness.

**Resources**

* [‘Unleash Speed & Agility at Home’ (YouTube)](https://www.youtube.com/watch?v=wiPYyqSkuEs)
* [’15 Min Intense HIIT Workout For Fat Burn & Cardio (No Equipment, No Repeats)’ YouTube)](https://www.youtube.com/watch?v=J212vz33gU4)
* **2021 Paper 1 (Synoptic)** Evaluate the effectiveness of high intensity interval training (HIIT) for a central midfielder in football.(8 marks)
* **2021 Paper 2 (Synoptic)** In 2012, Lance Armstrong was stripped of his seven Tour de France titles and given a lifetime ban for using banned substances including erythropoietin (EPO). Evaluate the choice made by other professional cyclists to inject EPO instead of relying on altitude training alone to improve performance. Refer to the physiological effects of EPO on the cyclist in your answer. (8 marks**)**
* **2022 Paper 1** Evaluate the effectiveness of altitude training for an endurance athlete preparing for a one-off event like the London Marathon. (8 marks)

**Skill Acquisition**

**Skill, skills continuums and transfer of skills**

**Specification content**

* Characteristics of skill
* Use of skill continua:
* open – closed
* discrete – serial – continuous
* gross – fine
* self-paced – externally paced
* high – low
* simple – complex
* Justification of skill placement on each of the continua

**Learning outcome**

* To know the characteristics of skill.
* To be able to classify skills on different skill continua.
* [Could teach methods of presenting practice following this topic](file:///K%3A%5CContent%20and%20Resources%5CSubjects%5CPE%5CA-level%5CA-level%20PE%20SOW%5CA%20level%20PE%20SOW%20v1.4.docx#Practice).

**Learning activity**

* Introduce skills and the characteristics through observation of elite vs novice performers (swimmers and hurdlers are good examples to use).
* Introduce the skill classification continua.
* Classify a selection of skills on the continua. Justify their placements.
* Make use of A3 laminated continua and colour coded skills to be placed on these. Students move around and check other students on a rotation and move any they think are wrong.

**Differentiation and extension**

Classify skills from their own sport. Does classification change in different situations?

**Resources**

* + - * + **2018 Paper 1** 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. (15 marks)

* **2021 Paper 1** Great Britain’s Rebecca Romero won a silver medal in rowing at the Athens Olympics in 2004. She then changed to track cycling, winning individual pursuit gold at the Beijing Olympics in 2008. Analyse why an elite performer would find the switch from rower to cyclist easier than if they were to move from tennis to badminton. Use your knowledge of transfer of learning and the following skill continua:
* open – closed
* discrete – continuous
* simple – complex. (15 marks)

**Specification content**

* Transfer of learning:
	+ Positive
	+ negative
	+ zero
	+ bilateral
* Understanding of how transfer of learning impacts on skill development

**Learning outcomes**

* To name and describe the different types of transfer of learning.
* Give examples of each type of transfer from a sporting context.
* To understand how transfer of learning impacts on skill development.

**Learning activity**

* Look at how Novak Djokovic shows off his netball skills.
* Transfer of learning – discussion to lead into the meaning of the term. If you have never played a sport, how can you perform some of the skills in it and have success?
* Use image cards to match up the types of transfer of learning as a guided discovery task.
* Once paired up, introduce the names of the transfer and ask students to try to place the name to the paired cards.
* Provide students then with the information card sort to define the different transfer types.

**Differentiation and extension**

* Explain own examples of skills from a variety of sports.
* Research other athletes who have had success transferring to a different sport.

**Resource**

**2021 Paper 1** Great Britain’s Rebecca Romero won a silver medal in rowing at the Athens Olympics in 2004. She then changed to track cycling, winning individual pursuit gold at the Beijing Olympics in 2008. Analyse why an elite performer would find the switch from rower to cyclist easier than if they were to move from tennis to badminton. Use your knowledge of transfer of learning and the following skill continua:

* open – closed
	+ discrete – Continuous
	+ simple – complex. (15 marks)

**Impact of skill classification on structure of practice for learning**

**Specification content**

* Methods of presenting practice (whole, progressive part, whole–part–whole etc)
* Understanding how knowledge of skill classification informs practice structure (presentation and type) to allow learning/development of skills

**Learning outcome**

* Be able to describe the three different methods of presenting a practice.
* Be able to link each method of presenting a practice to a given skill learning situation.
* Be able to evaluate the factors to consider in deciding how to present a practice (including skill classification).
* Could teach with skill classification.

**Learning activity**

* Sprint start, tennis serve, triple jump and golf swing are examples of skills that you could use to break skills down.
* Card sort activity to break skills down can be given in small groups to help them work on the progressive part method.
* Look at tennis serve examples.
* Identify skills used and link to method and justification.

**Resource**

**2018 Paper 1** 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. (15 marks)

**Specification content**

* Types of practice (massed, distributed, variable, mental practice etc)
* Understanding how knowledge of skill classification informs practice structure (presentation and type) to allow learning/development of skills

**Learning outcomes**

* Be able to name and describe the four types of practice methods.
* Be able to link each type of practice to a given skill learning situation.
* Be able to evaluate the factors to consider in deciding how to present a practice (including skill classification).

**Learning activity**

* Use image cards representing different types of practice to provoke discussion prior to naming the types of practice.
* Match up the cards with the description of the practice then with the names of practice types.
* Use skill classification cards to match them up.

**Resources**

* [’Variable Practice’ (YouTube)](https://www.youtube.com/watch?v=hwhvqx5HKsY)
* **2018 AS Paper** Coaches need to consider the nature of the skills and the experience of the performers when structuring a practice session. Evaluate the use of massed **and** distributed practice when coaching a group of beginners, in a game such as basketball. (8 marks)
* **2022 paper 1** Trampolinists **A** and **B** have both performed the same set routine on a number of occasions in training. For each attempt they have been awarded an execution score out of 10 by their coach, with 10 being the best possible score. The table below shows the execution scores the trampolinists were awarded for each attempt.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Attempt number** | **1** | **2** | **3** | **4** | **5** | **6** |
| **Trampolinist A scores** | 9.7 | 9.8 | 9.8 | 9.7 | 9.6 | 9.8 |
| **Trampolinist B scores** | 3.7 | 3.4 | 4.2 | 4.7 | 5.9 | 5.1 |

Evaluate whether massed practice or distributed practice would be most effective for their coach to use with:

* Trampolinist A
* Trampolinist B
* Refer to each trampolinist’s stage of learning in your answer. (15 marks)

**Principles and theories of learning and performance**

**Specification content**

Cognitive, associative and autonomous

**Learning outcome**

* To know and understand the stages of learning and how feedback differs between the different stages of learning.
* Possibility of teaching feedback here.

**Learning activity**

* Stages of learning introduced via characteristic card sort activity with each stage defined and explained.
* Recap the types of feedback and get students to add these to their A3 stages of learning and feedback model sheets.
* Why would a novice require extrinsic feedback?

**Differentiation and extension**

Plan a session for teaching the same skill for different phases showing the changes you would make and why.

**Resources**

* [’Understanding motor learning stages improves skill instruction’ article (Human Kinetics)](https://us.humankinetics.com/blogs/excerpt/understanding-motor-learning-stages-improves-skill-instruction)
* [‘AQA A-level PE: Stages of Learning’ (YouTube)](https://www.youtube.com/watch?v=C0QfC9V57sY&t)

**Specification content**

Learning plateau

**Learning outcomes**

To know and understand the causes and solutions.

**Learning activity**

* Learning plateaus introduced via a data collection/application task.
* Data given on 50 free throw basketball shots recorded over 15 weeks of learning. Students to plot the graph and identify the plateau.
* Causes and solutions match up used to separate these and form a discussion.

**Resources**

* [‘AQA A-level PE: Learning Plateaus’](https://www.youtube.com/watch?v=ccTnnuYkP0g)[(YouTube)](https://www.youtube.com/watch?v=ccTnnuYkP0g)
* **2022 Paper 1 (Synoptic)** A high jumper is experiencing a learning plateau. Evaluate the effectiveness of setting a SMARTER process goal to overcome this learning plateau. Refer to an appropriate goal in your answer. **(8 marks)**

**Specification content**

Insight learning (Gestalt)

**Learning outcome**

To know and understand cognitive theories.

**Learning activity**

* Watch the video [’Insight learning: Chimpanzee Problem Solving’ (YouTube).](https://www.youtube.com/watch?v=fPz6uvIbWZE)
* How could this apply to coaching a skill in your chosen sport?
* Look at the advantages and disadvantages of using such a method to cause learning.

**Resource**

[’Insight or Cognitive Learning’ (YouTube)](https://www.youtube.com/watch?v=1YZhFIOgJ-Y&t)

**Specification content**

* Operant conditioning (Skinner)
* Social learning

**Learning outcome**

To understand Behaviourism.

**Learning activity**

* Practical within lesson using a reinforcer, eg to one student, every time they attempt to answer a question give them something.
* Encouraging desired behaviour through the use of reinforcement.
* Using the same sporting example as the cognitive theory, state how you would coach the skill using behaviourism theory.

**Resources**

* [‘The difference between classical and operant conditioning’ (YouTube: Ted-ED)](https://www.youtube.com/watch?v=H6LEcM0E0io)  (YouTube)
* [’Big Bang Theory operant conditioning’ (YouTube)](https://www.youtube.com/watch?v=5XUvm_smWHY)

**Specification content**

* Observational learning (Bandura)
* Constructivism

**Learning outcome**

To understand social learning.

**Learning activity**

* Watch the video ['The Bobo beatdown: Crash Course Psychology’ (YouTube).](https://www.youtube.com/watch?v=128Ts5r9NRE)
* This video summarises all learning theories, but begins with social learning theory.
* Using the same sporting example as the cognitive theory, state how you would coach the skill using social learning theory.

**Resources**

* [’The Bobo Doll Experiment - Albert Bandura on Social Learning’ (YouTube)](https://www.youtube.com/watch?v=6lYsmt9qUVI&t)
* **2020 AS Paper** Analyse how increased media coverage of football can positively impact on the standard of a young player’s performance. Refer to Bandura’s observational learning theory in your answer. (8 marks)

**Specification content**

Social development theory (Vygotsky)

**Learning outcome**

To understand constructivism.

**Learning activity**

* Teach the students to juggle to demonstrate the zone of proximal development. Let them try alone without any help for 5 minutes to demonstrate the task is too difficult and learning is slow.
* Then guide them through the process slowly as a whole class.
* Focus on the social interaction of the teacher and the student in guiding learning.
* Compare and evaluate all four learning theories in relation to skills being taught and the level of the performer.

**Resources**

* [Vygotsky’s Theory Of Cognitive Development article (Simply Psychology)](https://www.simplypsychology.org/vygotsky.html)
* [’Lev Vygotsky Sociocultural Theory’ (YouTube)](https://www.youtube.com/watch?v=_fWm7cF8-WM)

**Use of guidance and feedback**

**Specification content**

* Methods of guidance (verbal, visual, manual and mechanical).
* Understanding of how guidance impacts on skill development.

**Learning outcome**

* Be able to name and describe the four types of guidance.
* Be able to link each method of guidance to a given skill learning situation.

**Learning activity**

* Introduce the four types of guidance and define each term.
* Make use of videos to support the learning of each method and how they develop skills. Link to kinaesthesis.

**Resources**

* [Guidance techniques (Hodder Education: PE Review)](https://www.hoddereducation.com/media/Documents/magazine-extras/PE%20Review/PE%20Rev%20Vol%20%208%20No%203/PERev-8_3-Guidance-techniques.pdf)
* **2021 Paper 1** Evaluate the effectiveness of the different methods of guidance that could be used when teaching a swimmer who is in the cognitive stage of learning. (8 marks)

**Specification content**

* Understand the different purposes and types of feedback (knowledge of performance (KOP), knowledge of results (KOR), positive, negative, intrinsic and extrinsic)
* Understanding of how feedback impacts on skill development

**Learning outcome**

* Be able to name and describe the six methods of feedback.
* Be able to link each type of feedback to a given skill learning situation.
* Be able to evaluate the factors to consider on deciding on which feedback is most appropriate and how feedback impacts on skill development.
* Possibility to teach feedback with stages of learning.

**Learning activity**

* Practical task – throwing into a target. Give no feedback, give KOR, and KOP. Compare results.
* In pairs or small groups, provide students with a scenario/statement card.
* Display the six types of feedback on the board and ask students to choose which type of feedback matches their card.
* Feedback to the whole class and then match up and define each method.

**Differentiation and extension**

Why might feedback change with ability?

**Resources**

* [The six feedback and learning stages (Hodder Education: PE Review)](https://www.hoddereducation.com/media/Documents/magazine-extras/PE%20Review/PERev%2017_1/PEReview17_1_poster.pdf)
* **2020 paper 1 (Synoptic)** Developments in video and analysis programmes have changed how coaches provide feedback to performers. Evaluate the impact of these developments on a coach’s ability to provide effective feedback to an athlete in the cognitive stage of learning. (8 marks)

**Memory models**

**Specification content**

* Senses
* Receptors
* Proprioception
* Perception
* DCR process
* Selective attention

**Learning outcome**

To understand input.

**Learning activity**

* Watch [the moonwalking bear awareness test clip (Awareness Test)](https://www.awarenesstest.co.uk/moonwalking-bear-awareness-test/)/[the basketball awareness test clip (Awareness Test).](https://www.awarenesstest.co.uk/basketball-awareness-test/)
* Consider how you take in information in your sport.

**Differentiation and extension**

Compare speed of input from different senses.

**Resources**

* [’Sense and Perception - Skill Acquisition in Sport’ (YouTube)](https://www.youtube.com/watch?v=qyjrBCLCfU4)
* **2019 Paper 1** A batsman in cricket may face a bowler who can deliver the ball at over 90mph. The batsman therefore needs to take in information and process it very quickly. Analyse how the input stage of information processing will differ between an international and a local club batsman and explain how a coach can adapt the strategies to improve selective attention to each player’s level of ability. (15 marks)

**Specification content**

Short and long term memory

**Learning outcome**

To understand decision making.

**Learning activity**

* Memory tests to show functions of short term memory.
* Describe your best sporting moment in detail; compare with a description of a game you played a month ago. Why do you remember one more?
* Draw memory model applying to a sporting situation.

**Resource**

[’How does your memory work?’ (YouTube)](https://www.youtube.com/watch?v=TUoJc0NPajQ)

**Specification content**

Functions and characteristics of components of working memory model

**Learning outcome**

* To understand decision making.
* To know and understand Baddeley and Hitch’s, working memory model, memory system.
* To understand output and feedback.

**Learning activity**

* Memory tests to show functions of short term memory.
* Describe your best sporting moment in detail compare; with a description of a game you played a month ago. Why do you remember one more?
* Draw memory model applying to a sporting situation.

**Resources**

* [’Working Memory Model EXPLAINED’ (YouTube)](https://www.youtube.com/watch?v=We2GH6NIEBs)
* [’EVALUATING Working Memory Model’ (YouTube)](https://www.youtube.com/watch?v=WyTq8fI11vk)
* **2020 Paper 1** Baddeley and Hitch’s memory model operates within the general information processing model. Analyse how Baddeley and Hitch’s model allows a performer to make effective decisions when passing in a game of basketball. **(15 marks)**

**Efficiency of information processing**

**Specification content**

* Environment
* Display
* Sensory organs
* Perceptual mechanism
* Translatory mechanism
* Effector mechanism
* Muscular system output data
* Feedback data

**Learning outcome**

* Application of Whiting’s information processing model to a range of sporting contexts.
* Applied understanding of information processing terms within a sporting context.

**Learning activity**

* Extended descriptive writing explaining how we produce a sporting skill, using the key terms from the model.
* Model a perfect example.

**Resources**

* [‘AQA A-level PE: Whiting's Model of Information Processing’ (YouTube)](https://www.youtube.com/watch?v=gTbj6MIrpI4)
* **2023 Paper 1** Analyse how over arousal would impact on the information processing of a basketball player when attempting a pass. Refer to Whiting’s information processing model throughout your answer. (15 marks)

**Specification content**

* Simple reaction time
* Choice reaction time
* Temporal and spatial

**Learning outcome**

* To know the definitions of and the relationship between reaction time, response time and movement time.
* To understand anticipation and how it affects reaction time.

**Learning activity**

Watch the video [’ESPN's Sports Science: Penalty Kick’ (YouTube)](https://www.youtube.com/watch?v=ymgMNLPw1yY)

**Resource**

[Simple and choice reaction time test (PsyToolkit)](https://www.psytoolkit.org/lessons/experiment_simple_choice_rts.html)

**Specification content**

* Hick’s law
* Psychological refractory period (PRP)
* Single channel hypothesis

**Learning outcome**

* To know and understand factors affecting response time.
* To know strategies to improve response time.

**Learning activity**

* Card sorting task timed. Why are you slower when sorting into suits over colours?
* Video clips to show the PRP. Dummies and ball against net in tennis.
* Look at the example from the book *Bounce* by Matthew Syed, regarding a top table tennis player who looks and plays like he has the fastest reactions ever, but when tested he is quite poor. It is all due to experience.

**Differentiation and extension**

Complete a hypothesis for class reaction time test. If possible complete the test to prove your hypothesis.

**Resources**

* [’TheBEST sidesteps in Rugby Union HISTORY’ (YouTube)](https://www.youtube.com/watch?v=ZagTrKQYgvU)
* **2018 Paper 1** 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. (8 marks)

**Specification content**

* Recall
* Recognition
* Initial conditions
* Response specifications
* Sensory consequences
* Response outcomes

**Learning outcome**

* To know and understand Schmidt’s schema theory.
* Application of schema theory in sporting situations.

**Learning activity**

* Student to throw a paper ball into a bin from different positions repeating each three times – ask questions at each stage – preparation, execution and feedback.
* How did you change your actions and why?
* As a coach explain how you would teach a skill considering what you know about schema theory.

**Resources**

* [’Motor Programmes and Schema Theory’ (Teach PE)](https://www.teachpe.com/sports-psychology/motor-programs-schema-theory)
* **2019 Paper 1** Analyse how Schmidt’s schema theory can be applied to a single shot and the implications of this theory for the golfer’s coach when trying to maximise performance. (8 marks)

**Specification content**

Input – selective attention decision making process – chunking, chaining, response time and schema

**Learning outcome**

To know and understand strategies to improve information processing.

**Learning activity**

Produce a guide for an athlete informing them how they can improve their information processing.

**Resources**

* [’Memory & Info Processing article (Mr Wnuk PE)](https://sites.google.com/view/mrwnukpe/a-level-pe/skill-acquisition/memory-info-processing)
* **2019 Paper 1** A batsman in cricket may face a bowler who can deliver the ball at over 90 mph. The batsman therefore needs to take in information and process it very quickly. Analyse how the input stage of information processing will differ between an international and a local club batsman and explain how a coach can adapt the strategies to improve selective attention to each player’s level of ability. (15 marks)

**Sport and society**

**Pre-industrial (pre-1780)**

**Specification content**

* Characteristics of society and impact on sporting recreation (eg two-tier class system, rural, limited communication/technology/transport, widespread illiteracy, harsh lifestyle etc)
* Characteristics of sporting recreation (limited to mob football and real tennis)

**Learning outcome**

* To know the two-tier class system.
* To be able to describe the characteristics of popular and rational recreation for the higher and lower socioeconomic statuses.
* To understand how the two-tier system impacted on sporting recreation.

**Learning activity**

* Introduce what society looked like during pre-industrial times (pre-1780). Look at the two-tier system and their characteristics.
* Look at characteristics of mob football, real tennis and Wenlock Olympic Games through videos of Shrovetide football.
* Watch video clip on ‘Shrovetide Football’ (YouTube) then identify characteristics.
* Students to look over information sheets and make posters displaying the key characteristics.
* Make links to the characteristics of the activities and the class they were played by.

**Differentiation and extension**

Compare to current class divisions and differences across sporting activities.

**Resources**

* [’Horrible Histories Tudor Football’ (YouTube)](https://www.youtube.com/watch?v=QekjU1j1RB8)
* [‘The History Of 'Real Tennis' At Henry VIII's Royal Court - Tudor Tennis Challenge’ (YouTube)](https://www.youtube.com/watch?v=2udq8dyuNYA)

**Industrial and post-industrial (1780 - 1900)**

**Specification content**

* Characteristics and impact on sport (limited to development of association football, lawn tennis, rationalisation of track and field events and the role of the Wenlock Olympian Games)
* Industrial Revolution
* Urbanisation
* Transport and communication
* Provision through factories
* Three-tier class system (emphasis on middle class and working class)

**Learning outcome**

To understand how the industrial revolution, urbanisation, transport and communication and the factory system impacted society and sport.

**Learning activity**

* Introduce the industrial revolution and the changes that occurred to society as a result.
* Look at impact on activities played generally. Research and present on one of the sports.
* Compare society pre-industrial to industrial.

**Differentiation and extension**

Students investigate which football teams originated as factory teams.

**Resources**

* [’The Industrial Revolution: Crash Course European History’ (YouTube)](https://www.youtube.com/watch?v=zjK7PWmRRyg)
* **2020 Paper 1** Analyse how the changes in society between 1780 and 1900, driven by the Industrial Revolution, improved the sporting opportunities available to the working classes in Great Britain. (15 marks)
* **2022 Paper 1** The number of factories increased in the UK during the industrial and post-industrial period (1780–1900). Evaluate the impact of this development on the physical activity of the working class:
* at the start of the 19th century
* at the end of the 19th century.(8 marks**)**

**Specification content**

* Characteristics and impact on sport (limited to development of association football, lawn tennis and rationalisation of track and field events)
* Three-tier class system (emphasis on middle class and working class)
* The British Empire
* Churches and local authorities
* Public schools/universities
* Development of national governing bodies (NGBs)
* Consideration of the changing role of women in sport
* The status of amateur and professional performers

**Learning outcome**

* To understand how the British Empire and the church impacted society and sport.
* To be able to explain the three-tier class system.

**Learning activity**

* Recap Industrial Revolution influence from last lesson. Introduce the three-tier system that emerged towards the latter half of the 19th century.
* Show students the timeline from the industrial revolution to the creation of NGBs.
* Investigate the impact of the church and the British Empire on sporting activities, and also look at how sporting activities might have started to spread alongside improvements in transport.
* Students create a poster to recognise the importance of the development of NGBs due to society developments.

**Differentiation and extension**

* Students investigate which football teams originated as church teams.
* Research the key facts of the FA, British Tennis and British Athletics.

**Resources**

* [’The History of Football in 10 Minutes’ (YouTube)](https://www.youtube.com/watch?v=FBIwiK7U9l0&t)
* [’The English Game - Official Trailer’ (YouTube)](https://www.youtube.com/watch?v=hBOlhdSYhv8)
* [’The History of Tennis’ (YouTube)](https://www.youtube.com/watch?v=PWM6v7XLyeg)
* [‘Sport of athletics’ (Wikipedia)](https://en.wikipedia.org/wiki/Sport_of_athletics#:~:text=Organized%20athletics%20are%20traced%20back,other%20parts%20of%20the%20world.)
* **2021 Paper 1** Analyse how the emergence of the middle class in the industrial and post-industrial period (1780–1900) impacted on the sport of association football at this time. (8 marks)

**Post World War II (1950 to present)**

**Specification content**

* Characteristics and impact of the Golden Triangle (limited to development of association football, tennis and athletics)
* The interrelationship between commercialisation (including sponsorship), media (radio, TV, satellite, internet and social media) and sports and governing bodies

**Learning outcome**

To understand the interrelationship between commercialisation media, sports and governing bodies.

**Learning activity**

* Explore the use of various media (radio, TV, satellite, internet and social media) in sport.
* Research and discuss how media has led to rule changes in sport eg tennis tie break. What other areas of the sport have been influenced?
* Debate the positive and negative impacts of media on sport.
* Picture board quiz of sponsors to teams and sports.
* Look at sponsorship and what makes suitable sponsors for sport.
* Look at the benefits of sponsorship to the sport, sponsor and athlete. Discuss issues that could have arisen or could occur for an athlete.

**Differentiation and extension**

* Discuss how sport has changed as a result of commercialisation in both a positive and negative way.
* Consider the number and suitability of sponsors promoted in a football or tennis matches.

**Resources**

* **2020 AS Paper** Analyse how increased media coverage of football can positively impact on the standard of a young player’s performance. Refer to Bandura’s observational learning theory in your answer. (8 marks)
* **2020 Paper 2** Income from commercialisation has made an impact on sport. The graph below shows the income from Premier League television broadcasting rights over a 27 year period.



Evaluate the impact of commercialisation on professional football since the Premier League was formed in 1992. Refer to the graph above in your response. (8 marks)

* **2022 Paper 2 (Synoptic)** Media coverage of professional tennis has increased over the past 20 years. Tennis players are increasingly required to interact with the media in the lead-up to matches. Evaluate the impact the media may have on a professional tennis player’s self-efficacy in an upcoming match. Refer to Bandura’s Model of self-efficacy in your answer. (15 marks**)**

**Specification content**

The changing status of amateur and professional performers

**Learning outcome**

To know the key features of modern day amateurism and professionalism.

**Learning activity**

Look at case studies from football, tennis and athletics for amateur and professional athletes in these sports. Compare these athletes.

**Resources**

* [‘“Is Professionalism Killing Sport?” – Inside Sport – BBC Documentary’ (YouTube)](https://www.youtube.com/watch?v=h8eKMdHxig8)
* **2019 AS Paper** In 2018, Alexis Sánchez became the highest earner in the Premier League with a reported wage of £350 000 per week. Evaluate the impact that wages associated with modern day professionalism in association football has on the status and motivation of players. (8 marks)

**Specification content**

* Factors affecting the emergence of elite female performers in football (players and officials), tennis and athletics in the late 20th and early 21st century
* Characteristic of football, athletics and tennis

**Learning outcome**

To know the factors affecting the emergence of elite female performers in football, tennis and athletics.

**Learning activity**

* Practical task: groups given a set amount of money (monopoly money or chocolate coins). Groups are given athlete profiles (facts about their sport eg time played, level etc) in the three sports (football, tennis and athletics). They divide the funds up according to how much they think each athlete should be paid.
* Research salary changes in female sport. Compare to male figures. Should they earn the same? Discuss.
* Discuss opportunities to participate; refer to role models and media coverage.
* Discuss discrimination laws and other changes in society enabling women to increase their commitment to sport.

**Resources**

* [’Football: the business case for the women's game’ (YouTube)](https://www.youtube.com/watch?v=9vr67btmt6U)
* [The Guardian article ‘‘Trailblazer’ Rebecca Welch breaks new ground as Premier League referee’](https://www.theguardian.com/football/2023/dec/22/welchs-premier-league-milestone-should-be-understatedly-celebrated)
* **2020 Paper 1** In 2016 the Football Association (FA) estimated the number of qualified female football officials to be 850. This is a relatively small number and does not reflect the increase in the number of female football players. Evaluate the effectiveness of the strategies being used to overcome specific barriers that may prevent women from becoming football officials. (8 marks)

**Sociological theory applied to equal opportunities**

**Specification content**

Understanding of the definitions of the following key terms in relation to the study of sport and their impact on equal opportunities in sport and society:

* society
* socialisation (primary and secondary)
* social processes (social control and social change)

**Learning outcome**

To understand the key terms society, socialisation and social processes and their impact on equal opportunities in sport.

**Learning activity**

* Explain socialisation (primary and secondary).
* Explain social processes (Social control and social change).

**Resources**

**2018 Paper 1** 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. (8 marks)

**Specification content**

Understanding of the definitions of the following key terms in relation to the study of sport and their impact on equal opportunities in sport and society:

* social issues (causes and consequences of inequality)
* Social structures/stratification (eg schools/sports clubs)

**Learning outcome**

To understand the key terms social issues and social structure/stratification and their impact on equal opportunities in sport.

**Learning activity**

* Show images of different social groupings eg school friends, running groups and families.
* Describe leisure activities such groups would take part in and why.
* Discuss the ways in which society groups itself for the purpose of daily activities.
* Identify which are primary, which are secondary, and why.

**Differentiation and extension**

Explain why both primary and secondary influences are vital for healthy development.

**Resource**

**2019 Paper 1** Social stratification can impact on the sports participation of an individual. One example of social stratification may be the class that an individual belongs to. Evaluate the different sporting experiences that upper class and working class 15 year olds may have and how this might impact on their life-long participation in sport. (8 marks)

**Specification content**

Understanding social action theory in relation to social issues in physical activity and sport (impact of sport on society and of society on sport)

**Learning outcome**

To investigate Social Action Theory in relation to physical activity and sport.

**Learning activity**

* Introduce Social Action Theory.
* Discuss how social issues are, or have been, reflected in sport?
* Can sport change society for the better? Give possible examples of where this has happened.

**Differentiation and extension**

Discuss that sport reflects society.

**Resource**

**2020 Paper 1** Describe the main concepts of social action theory. (4 marks)

**Specification content**

* Understanding the key terms relating to equal opportunities (discrimination, stereotyping, prejudice etc)
* The barriers to participation in sport and physical activity and possible solutions to overcome them for under-represented groups in sport; for eg people with disabilities

**Learning outcomes**

* To understand the terms equal opportunities, discrimination, stereotyping and prejudice.
* To know the barriers to participation for the disabled in sport and physical activities, and possible solutions to overcome them.

**Learning activity**

* Introduction - on entering the classroom students could be treated differently according to a specific feature eg blonde hair.
* Use of media articles and figures to show prejudice and discrimination to target groups.
* Practical – play a disability sport and consider all implications for both the sport and the individual. Discussion point – should sport be segregated or inclusive?
* Possibility of a visit to a local sports centre who may have facilities and equipment for people with disabilities eg wheelchair basketball.

**Differentiation and extension**

Research the factors you would have to consider to set up a disability sports club at school.

**Resources**

* [’Rising Phoenix: official trailer for Paralympics documentary’](https://www.youtube.com/watch?v=0CjA0j4lSuA&t)[(YouTube)](https://www.youtube.com/watch?v=0CjA0j4lSuA&t)
* [‘Disabled people’ (Sports England)](https://www.sportengland.org/research-and-data/research/disabled-people)
* **2018 Paper 1** 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. (15 marks)

* **2021 Paper 1 (Synoptic)** Studies suggest that children with disabilities report experiencing low self-efficacy when playing sport. Analyse how discrimination, stereotyping and prejudice can explain the children’s low self-efficacy when applied to Bandura’s model. (15 marks)

**Specification content**

The barriers to participation in sport and physical activity and possible solutions to overcome them for under-represented groups in sport (ethnic groups)

**Learning outcome**

To know the barriers to participation for ethnic groups in sport and physical activity and possible solutions to overcome them.

**Learning activity**

* Analyse ethnic participation in elite sports – compare sports. How many White quarterbacks are there in the NFL? Show clips of recent Olympians breaking barriers eg Black swimmer and refugee runner. Students to identify barriers.
* Discuss reasons and causes of barriers, and ways to overcome these. Link to cultural differences and stereotypes.

**Differentiation and extension**

Look at examples of channelling, stereotyping and stacking in sport.

**Resources**

* [’Anton Ferdinand Football, Racism and Me’ (YouTube)](https://www.youtube.com/watch?v=joZ-Dd5Tac0)
* [’Ethnicity’ (Sport England)](https://www.sportengland.org/research-and-data/research/ethnicity)

**Specification content**

The barriers to participation in sport and physical activity and possible solutions to overcome them for under-represented groups in sport (gender)

**Learning outcome**

To know the barriers to participation for women in sport and physical activities, and possible solutions to overcome them.

**Learning activity**

* Possible group research tasks focussed on barriers eg use of media coverage – compare newspaper articles on men’s sports to women’s.
* Are there differences in the images of both genders?
* Compare attendance figures at women’s events to men’s in different sports?

**Differentiation and extension**

Analyse the change in women’s participation levels in sport.

**Resources**

* [’Gender’ Sport England)](https://www.sportengland.org/research-and-data/research/gender)
* **2020 Paper 1** In 2016 the Football Association (FA) estimated the number of qualified female football officials to be 850. This is a relatively small number and does not reflect the increase in the number of female football players. Evaluate the effectiveness of the strategies being used to overcome specific barriers that may prevent women from becoming football officials. (8 marks)

**Specification content**

The barriers to participation in sport and physical activity and possible solutions to overcome them for under-represented groups in sport

**Learning outcome**

To know the barriers to participation for the disadvantaged in sport and physical activities, and possible solutions to overcome them.

**Learning activity**

* Ask students how much they spend on playing their sport. Compare to how much you spend on your sport (give students examples). Images of private gyms compared to public.
* What other barriers do people have in disadvantaged areas?
* Show profile of areas of low socioeconomic status in relation to health, crime and sport/activity – discuss the impact of increasing participation on these areas.

**Differentiation and extension**

Scenario: New facility manager at a centre in an area of low socioeconomic status – How would you increase participation at your centre?

**Resource**

[’Lower socio-economic groups’ (Sports England)](https://www.sportengland.org/research-and-data/research/lower-socio-economic-groups#:~:text=Our%20Active%20Lives%20Adult%20Survey,to%20be%20active%20(54%25).)

**Specification content**

* Benefits of raising participation (health benefits, fitness benefits, social benefits etc)
* The interrelationship between Sport England, local and national partners to increase participation at grass roots level and underrepresented groups in sport

**Learning outcome**

Identify the benefits of raising participation to both society and the individual.

**Learning activity**

* Match benefit to the area helped.
* Show profile of low socioeconomic status areas in relation to health, crime and fitness.
* Research Sport England’s role in increasing participation in your local area.

**Differentiation and extension**

Produce a flyer to raise the importance of participation in activity.

**Resources**

* [’Uniting the movement video and article’ (Sport England)](https://www.sportengland.org/)
* [’About Active Partnerships’ article and video (Active Partnerships)](https://www.activepartnerships.org/about-us)
* **2020 AS Paper** Evaluate the use of regular circuit training to bring about fitness benefits for a sedentary adult and the impact this may have on completing everyday tasks. (8 marks)
* **2019 Paper 1 (Synoptic)** Analyse how campaigns such as ‘This Girl Can’ might overcome barriers to female participation in sport and change attitudes. (15 marks)
* **2022 Paper 1** Active Partnerships, formerly County Sports Partnerships, are an example of a local partner of Sport England. Sport England’s local partners work to overcome the barriers to participation that some groups may face. Analyse how the work of Sport England’s local partners can overcome the barriers to participation for those disadvantaged by their socio-economic status. (15 marks)

**Exercise physiology**

**Diet and nutrition and their effect on physical activity and performance**

**Specification content**

Understand the exercise-related function of: carbohydrates, fibre, fats (saturated fat, trans fat and cholesterol), protein, vitamins (C, D, B-12 and B-complex), minerals (sodium, iron and calcium) and water (hydration before, during and after physical activity)

**Learning outcome**

To understand the exercise-related function of food classes.

**Learning activity**

* Recap prior knowledge in relation to the seven nutrients. Introduction of specific fats, minerals and vitamins.
* Get students to look at the content of their food and see which nutrients they are consuming. Could be done through top trumps game (possible starter activity).
* Students conduct a research activity on the exercise related function of each of the food classes and then produce a presentation looking at diet of elite athletes and comparing them between sports.

**Differentiation and extension**

Use of sports specific diets eg high protein or carbohydrate loading.

**Resources**

* [’Eat like an athlete hub’ (Good Food)](https://www.bbcgoodfood.com/howto/guide/eat-athlete-hub)
* [Nutrition for sport and exercise (British Nutrition Foundation)](https://www.nutrition.org.uk/putting-it-into-practice/keeping-active/nutrition-for-sports-and-exercise/)

**Specification content**

Creatine, sodium bicarbonate, caffeine and Glycogen loading

**Learning outcome**

To understand the positive and negative effects of dietary supplements/manipulation on the performer.

**Learning activity**

* Possibility of guest speaker – nutrition expert/sports scientist.
* Students to research the use of these methods in sport. Why would athletes use these methods?
* What are the issues surrounding dietary manipulation?

**Differentiation and extension**

Link to specific sporting activities.

**Resources**

* [Cycling Weekly website: Supplements for cyclists article](https://www.cyclingweekly.com/fitness/supplements-for-cyclists-368262)
* **2018 Paper 2** An elite weight lifter is taking part in a strength-training programme to improve performance in the next competition. As part of the programme, the weight lifter is considering taking creatine and anabolic steroids in addition to weight training. Evaluate the use of creatine and anabolic steroids to improve the weight lifter’s performance in the next competition. (8 marks)
* **2022 Paper 1 (Synoptic)** Each of the following athletes uses a different main energy system to resynthesise ATP during a race:
	+ Athlete A is a 100 m runner
	+ Athlete B is a 400 m runner
	+ Athlete C is a marathon runner.

Analyse how each of these athletes could use different dietary supplements or manipulation to optimise their performance in a race. Refer to the relevant energy systems throughout your answer. (15 marks)

**Preparation and training methods in relation to maintaining physical activity and performance**

**Specification content**

Understanding of the key data terms relating to laboratory conditions and field tests (Quantitative and qualitative, objective and subjective, validity and reliability)

**Learning outcome**

To understand key data terms for laboratory conditions and field tests.

**Learning activity**

* Using fitness test results as an example, explore the terms giving examples.
* Practical possibility: Use a KS3 PE group to collect data and examine figures obtained in relation to the terms.

**Resources**

* **2018 Paper 2 (Synoptic)** GPS technology is becoming more popular with sports teams to analyse players’ movements in training and during games. Evaluate the use of GPS technology and the data it provides. (8 marks)
* **2021 Paper 2 (Synoptic)** A coach can use observations, questionnaires, or physiological measures to obtain data on anxiety levels. Evaluate the use of each measure to provide valid and reliable data to assess anxiety in sport. (15 marks)

**Specification content**

Physiological effects and benefits of a warm-up and cool down (stretching for different types of physical activity (static and ballistic)

**Learning outcome**

To understand the physiological effects and benefits of a warm-up and cool down.

**Learning activity**

* Teach in a practical setting – students to complete different types of warm up and cool down activities and sort effects to match the activities.
* Create a suitable warm–up and cool down for your sport and level of performance.

**Differentiation and extension**

Matching exercise - match reasons and benefits with warming up/cooling down.

**Resources**

* [’The Importance Of Stretching: Warming Up & Cooling Down’ (YouTube)](https://www.youtube.com/watch?v=iihVzV3u1R4)
* **2019 Paper 2** A golf coach believes the most important aim of a warm-up is stress management. A rugby coach believes the most important aim of a warm-up is injury prevention. Evaluate these two statements. (15 marks)

**Specification content**

Principles of training (specificity, progressive overload, reversibility, recovery, and frequency intensity time type (FITT) of training principles)

**Learning outcome**

To know the principles of training.

**Learning activity**

* Explain that training will only improve performance if the principles are followed.
* Give a working example of a training programme and ask students to read through and highlight where they see examples of the principles.

**Differentiation and extension**

Ask students to produce their own training program for a period of time in their sport.

**Resources**

* [12 week training programme (Manchester Marathon)](https://www.manchestermarathon.co.uk/wp-content/uploads/sites/9/2023/01/adidas-Manchester-Marathon-2023-Intermediate-12-Week-Training-Plan.pdf)
* **2021 Paper 2** A runner has followed a continuous training programme three times per week for the last six weeks to prepare for a 5 km race. The race is scheduled to take place in four weeks’ time. Analyse how applying the FITT principles to the runner’s training could improve their performance during the race. (8 marks)

**Specification content**

Application of principles of periodisation (Macro cycle, Meso cycle, Micro cycle, preparation, competition, transition, tapering and peaking)

**Learning outcome**

To understand and apply the principles of periodisation.

**Learning activity**

* Look at the sporting years of an Olympic athlete eg Mo Farah, Andy Murray etc. How can they ensure their performance peaks for each major tournament/competition?
* Possibility of relating it to their school year and peaking for assessment points/exams..
* Look at how training changes throughout these periods and consider the characteristics of different types of training.

**Differentiation and extension**

Consider the differences in relation to sports and the demands of their competitions eg boxing vs tennis.

**Resources**

* **2018 AS Paper** Analyse how athletes could use goal setting to increase the effectiveness of periodisation when training for an Olympic Games. (8 marks)
* **2020 Paper 2** Adam Peaty has set multiple new world records in the 100 m breaststroke.

The table below shows his performances in some major championships over a two year period.

|  |  |  |
| --- | --- | --- |
| **Year and competition** | **Time (seconds)** | **Position** |
| 2016 Olympic Games | 57.13 (world record) | 1st |
| 2018 European Championships | 57.00 (world record) | 1st |

Analyse how Adam Peaty would use Macro, Meso and Micro cycles to achieve these performances. (8 marks)

**Specification content**

Training methods to improve physical fitness and health:

* High Intensity Interval training (HIIT) (anaerobic power)
* continuous training (aerobic power)
* fartlek (aerobic power)
* circuit training (muscular power
* weight training (strength)
* Proprioceptive Neuromuscular Facilitation (PNF) (flexibility)

**Learning outcome**

To know how the different training methods improve physical fitness and health.

**Learning activity**

* Practical teaching task – groups to research a training method each and deliver a session to the class explaining how it helps performance.
* Complete a fitness profile of your sport. (Provide an example for students.)
* Introduction to training methods – possible practical session.
* Bringing your knowledge together:
* Which training method should I use for my sport?
* Produce a presentation or training guide for your sport.

**Resources**

* **2018 Paper 1 (Synoptic)** 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. (15 marks)
* **2020 AS Paper** Evaluate the use of regular circuit training to bring about fitness benefits for a sedentary adult and the impact this may have on completing everyday tasks.(8 marks)
* **2021 Paper 1 (Synoptic)** Evaluate the effectiveness of High Intensity Interval Training (HIIT) for a central midfielder in football. (8 marks)

**I****njury prevention and the rehabilitation of injury**

**Specification content**

* Acute (fractures, dislocations, strains, sprains etc)
* Chronic (Achilles tendonitis, stress fracture, ‘tennis elbow’ etc)

**Learning outcome**

To understand the different types of injury.

**Learning activity**

* Look at the [image of injuries suffered by jockey Ruby Walsh (Iron man) during his career.](https://media.balls.ie/uploads/2015/03/ruby-walsh-iron-man1.jpg)
* Ask students to identify the injury types suffered by sports people and how they are sustained.

**Specification content**

Injury prevention methods:

* screening
* protective equipment
* warm up, flexibility training (active, passive, static and ballistic), and taping and bracing
* injury rehabilitation methods (proprioceptive training, strength training, hyperbaric chambers, cryotherapy, hydrotherapy etc)
* recovery from exercise (compression garments, massage/foam rollers, cold therapy, ice bath, cryotherapy etc)

**Learning outcome**

* To understand different methods used in injury prevention, rehabilitation and recovery.
	+ To understand the physiological reasons for methods used in injury rehabilitation.
	+ To understand cryotherapy as a method of treatment.
	+ To understand hyperbaric chamber as a method of treatment.

**Learning activity**

* Watch clips from the movie *I am Bolt* showing him using cryotherapy, massage and other methods of rehab and injury prevention.
* Visit to centres with these chambers.
* Show examples of stars who have used these eg David Beckham, Michael Jackson etc. Why would they use them?

**Resources**

* [’Jamie Carragher gets put through a transfer medical’ (YouTube)](https://www.youtube.com/watch?v=P8O77SV2kQA)
* **2019 Paper 2** Evaluate the use of different types of strength training during injury rehabilitation.(8 marks)
* **2022 Paper 2** Elite-level rugby players are at high risk of suffering from musculo-skeletal injuries due to the physical nature of the sport. Evaluate the use of screening to prevent musculo-skeletal injuries in elite rugby.(8 marks)
* [’Exclusive - Cryotherapy recovery session with the Lionesses - Inside Access’ (YouTube)](https://www.youtube.com/watch?v=qoE7JtDptRQ)
* [’My new Hyperbaric chamber- Best recovery ever’ (YouTube)](https://www.youtube.com/watch?v=QpC50jgmJ5Y)
* **2019 Paper 1 (Synoptic)** Analyse how cryotherapy aids recovery from exercise by causing the body to redistribute blood flow.(8 marks)

**Biomechanical movement**

**Biomechanical principles**

**Specification content**

First law (inertia), second law (acceleration), third law (action/reaction), and Force

Height of centre of mass, area of base of support, position of line of gravity and body mass

**Learning outcome**

* To understand Newton’s three laws of linear motion applied to sporting movements.
* To understand the term centre of mass.
* To understand the factors affecting stability.

**Learning activity**

* Option to teach as a practical.
* Types of force – stations with small activity for students to identify the force causing movement (muscular, air resistance, gravity, friction, ground reaction force etc).
* Pose the question what will happen to the object if no force acts on it? Demonstrate with a still object and then a moving object (eg tennis ball).
* Blowing a table tennis ball across the table length – team competition in pairs.
* What forces are acting on the ball? Why would it be harder to move a shot than the tennis ball?
* Look at the netball bounce pass – why does the ball bounce up into the hands of the other player when done correctly and not if done poorly?

**Differentiation and extension**

Identify moments in your sport where each of Newton’s laws occur.

**Resources**

* [’Newton’s Laws: Crash Course Physic’ (YouTube)](https://www.youtube.com/watch?v=kKKM8Y-u7ds&t)
* [’Newton's 3 Laws, with a bicycle’ (YouTube)](https://www.youtube.com/watch?v=JGO_zDWmkvk)
* **2018 AS Paper (Synoptic)** It is important for sprinters to push off the blocks effectively to achieve a fast start. Using Newton’s first and second laws of linear motion and knowledge of the neuromuscular system, analyse how a sprinter is able to achieve a fast start.(8 marks)
* **2020 Paper 2 (Synoptic)** Analyse how the gymnast is able to perform this explosive movement successfully. Refer to Newton’s Laws of linear motion and the recruitment of muscle fibres in your answer. (15 marks)
* **AS Paper 2019** Figure 4 shows a rugby player about to make a tackle. Analyse how factors affecting stability can affect the success of a rugby player’s tackle.(8 marks)

**Levers**

**Learning outcomes**

* To know the three classes of lever and examples of their use in the body during physical activity and sport.
* To understand the mechanical advantage and mechanical disadvantage of each class of lever.

**Learning activity**

* Use the rhyme method 1, 2, 3, F, L, E whilst extending elbow, up onto toes and flexing elbow.
* Provide images of levers in action for students to label.
* Show video clips of levers in action to aid understanding.

**Learning activity**

* Labelling of effort and resistance arm to help explain.
* Give a practical example.

**Resources**

* [‘The mighty mathematics of the lever’ (YouTube: TEDed)](https://www.youtube.com/watch?v=YlYEi0PgG1g)
* [’The 3 Classes of Levers - How we use levers in the world and our bodies’ (YouTube)](https://www.youtube.com/watch?v=A0y_2b8SSbs)
* **2020 Paper 1 (Synoptic)** Analyse how the musculo-skeletal and lever systems operating at the knee and ankle of the take-off leg contribute to gaining maximum height in the high jump.(15 marks)

**Linear motion**

**Specification content**

Gravity, frictional force, air resistance, internal muscular force and weight

**Learning outcome**

An understanding of the forces acting on a performer during linear motion.

**Learning activity**

Show students clips of sports performers in action eg skiers, high jump, long jump, sumo wrestlers, runners etc. Ask students to identify the forces acting on the performers.

**Differentiation and extension**

Distinguish between horizontal and vertical forces by for eg looking at an image or watching a video of a sports performer.

**Specification content**

* Definitions, equations and units of vectors
* Definitions, equations and units of scalars

**Learning outcome**

* To understand weight, velocity, displacement, acceleration and momentum.
* To understand mass, speed and distance.

**Learning activity**

Matching graphs with moments within a race.

**Resources**

* [’GCSE Physics - Scalars and Vector Quantities’](https://www.youtube.com/watch?v=iLB_4Wu2QOg)[(YouTube)](https://www.youtube.com/watch?v=iLB_4Wu2QOg)
* [**’**Gridiron physics: Scalars and vectors’ (YouTube: TEDed)](https://www.youtube.com/watch?v=nF5S0FLp19Y)

**Angular motion**

**Specification content**

Angular displacement, angular velocity, angular acceleration and conservation of angular momentum

**Learning outcomes**

* To understand application of Newton’s laws to angular motion.
* To know definitions and units for angular motion.
* To understand conservation of angular momentum during flight, moment of inertia and its relationship with angular velocity.

**Learning Activity**

Show the image on a graph of these terms and relate to the phases of a somersault.

**Resources**

* [Sports Science Hub: Angular motion (YouTube)](https://www.youtube.com/watch?v=TxU7E5_2mk4)
* [’World Record Figure Skating Spin’ (YouTube)](https://www.youtube.com/watch?v=AQLtcEAG9v0)
* **2021 Paper 2** The graph below represents the principle of conservation of angular momentum applied to a gymnast as they perform a front tuck somersault.



Analyse how the gymnast makes use of the principle of conservation of angular momentum when performing a front tuck somersault. Refer to the graph above in your answer. (15 marks)

**Projectile motion**

**Specification content**

Comparison of shot put and badminton shuttle

**Learning outcomes**

* To know and understand factors affecting horizontal displacement of different projectiles and their flight paths.
* To understand the vector components of parabolic flight.

**Resources**

* **2019 Paper 2** Analyse the factors affecting the flight path of the shot put and how an athlete can maximise horizontal displacement.(15 marks)
	+ **2022 Paper 1** Analyse how an athlete can maximise the distance a discus travels. Use your knowledge of the factors affecting horizontal displacement of projectiles and the Bernoulli principle in your answer. (15 marks)

**Fluid mechanics**

**Specification content**

Drag and lift

**Learning outcome**

To understand dynamic fluid force.

**Resources**

* [‘Stop Drag When Swimming’](https://www.youtube.com/watch?v=zXmhYnAKD-0)[(YouTube)](https://www.youtube.com/watch?v=zXmhYnAKD-0)
* [’Cycling’s speed secrets’ (YouTube)](https://www.youtube.com/watch?v=BSnPqvsFpJM)
* **2018 Paper 2** Analyse how Laura Kenny has maximised her speed in the photograph. Use Bernoulli’s principle of lift and knowledge of the factors that influence drag. (15 marks)

**Specification content**

* Upward lift force (discus)
* Downward lift force (speed skiers, cyclists, racing cars etc)

**Learning outcomes**

To know and understand the Bernoulli principle applied to sporting situations.

**Resources**

* [’F1 Aerodynamics - 1: The Basics’ (YouTube)](https://www.youtube.com/watch?v=ZFEzMKYjShc&t=335s)
* **2018 Paper 2** Analyse how Laura Kenny has maximised her speed in the photograph. Use Bernoulli’s principle of lift and knowledge of the factors that influence drag. (15 marks)
* **2022 Paper 2** Analyse how an athlete can maximise the distance a discus travels.
* Use your knowledge of the factors affecting horizontal displacement of projectiles and the Bernoulli principle in your answer. (15 marks)

**Sports psychology**

**Aspects of personality**

**Specification content**

* Understanding of the nature vs nurture debate in the development of personality
* Trait and social learning

**Learning outcome**

To understand the different schools of thought based on nature vs nurture.

**Learning activity**

* Describe the person sitting next to you. Are they always like this? Have they always been the same? Where did their personality characteristics come from? Discuss.
* Link to definition of personality.
* Discuss the situation of twins – identical and non-identical.
* Look at sporting examples of athletes who display different characteristics – What is their personality?
* Ask students to move a step right or left in response to questions based on extrovert–introvert scale.

**Resources**

* [’Nature vs Nurture: Behaviorism or Genetics’ (YouTube)](https://www.youtube.com/watch?v=tbSgU41FIac)
* [’So is it nature not nurture after all?’ (The Guardian)](https://www.theguardian.com/science/2018/sep/29/so-is-it-nature-not-nurture-after-all-genetics-robert-plomin-polygenic-testing)

**Specification content**

* Interactionist perspective (Hollander and Lewin)
* How knowledge of interactionist perspective can improve performance

**Learning outcome**

* To be able to state the equation for interactionist perspective on personality.
* State how sports coaches can use their knowledge of this theory to get the best from their performers.

**Learning activity**

* Introduction to Lewin’s interactionist perspective: B=f(PxE)
* Show students sporting examples of athletes who display different characteristics in different situations – Djokovic is a good example. Students to give their own examples.
* Label Hollander’s diagram giving examples.
* Could link to sports specific personality measure – profile of mood state (POMS) which supports Hollander’s viewpoint.
* How can a coach use this perspective to get the best from their performer?

**Differentiation and extension**

Complete personality test – POMS.

**Resource**

[’Personality Theories’ article (Mr Wnuk PE)](https://sites.google.com/view/mrwnukpe/a-level-pe/sport-psychology/personality-theories)

**Attitudes**

**Specification content**

* Triadic model (components of an attitude)
* Formation of attitudes

**Learning outcome**

To know and understand the Triadic model and its three components in relation to an attitude object.

**Learning activity**

* Use images to trigger attitudes/opinions of the class, eg spiders, female body builders, fitness tests, homeless people, smokers etc.
* Why do students have these attitudes towards these images (formation of attitudes)?
* Students to draw the Triadic model using their attitude to one of the above, then apply it to a sporting situation.

**Differentiation and extension**

Does attitude always predict behaviour?

**Resource**

[’Components of Attitude’](https://www.youtube.com/watch?v=ym7-UCipjpU&t)[(YouTube)](https://www.youtube.com/watch?v=ym7-UCipjpU&t)

**Specification content**

Changing attitudes through cognitive dissonance and persuasive communication

**Learning outcome**

To gain knowledge of how to change an attitude.

**Learning activity**

* Recap model components - place the labels onto the blank diagram of the Triadic model.
* Persuasion – students to play a persuasion game eg persuade your partner.
* How did you do this?
* Consider the difference between positive and negative attitudes. Link to Cognitive dissonance.
* Scenario: As a coach/captain you have an athlete who doesn’t do any fitness training. How can you change their negative attitude to fitness training to encourage them to train?

**Resource**

**2019 Paper 1 (Synoptic)** Analyse how campaigns such as ‘This Girl Can’ might overcome barriers to female participation in sport and change attitudes. (15 marks)

**Arousal**

**Specification content**

* Theories of arousal (Drive theory, inverted U theory)
* Theories of arousal (catastrophe theory and zone of optimal functioning theory)
* Practical applications of theories of arousal and their impact on performance
* Characteristics of peak flow experience

**Learning outcome**

To gain knowledge of the three theories of arousal – Drive theory, inverted U theory, catastrophe theory and zone of optimal functioning theory.

**Learning activity**

* Explain the definition of arousal – link to peak flow and being in the zone.
* Rate a list of events/situations on a continuum as to which would make you least and most stressed.
* Provide images of the graphs for the three theories – students to match the theory explanation to the graph.
* Discuss theory in relation to phase of learning and how this changes optimum arousal for peak performance.

**Resources**

* [’Theories of Arousal’ (YouTube)](https://www.youtube.com/watch?v=mkllc7U_KZ8)
* [’The haunting Masters meltdown that changed Rory McIlroy’s career’ (CNN Sports)](https://edition.cnn.com/2023/04/03/golf/rory-mcilroy-masters-meltdown-2011-spt-spc-intl/index.html)
* [Arousal article (Mr Wnuk PE)](https://sites.google.com/view/mrwnukpe/a-level-pe/sport-psychology/anxiety/arousal)

**Anxiety**

**Specification content**

Anxiety

**Learning outcome**

* To know the types of anxiety: somatic, cognitive, competitive trait and competitive state.
* To know and understand the advantages and disadvantages of using observations, questionnaires and physiological measures to measure anxiety.

**Resources**

* [Sports competition anxiety test](https://www.brianmac.co.uk/scat.htm) (Brian Mac sports coach)
* **2021 Paper 2 (Synoptic)** A coach can use observations, questionnaires, or physiological measures to obtain data on anxiety levels. Evaluate the use of each measure to provide valid and reliable data to assess anxiety in sport. (15 marks)

**Aggression**

**Specification content**

* Difference between aggression and assertive behaviour
* Theories of aggression (instinct theory, frustration aggression hypothesis, social learning theory and aggressive cue theory)
* Strategies to control aggression

**Learning outcome**

* To be able to distinguish between aggression and assertion in sport.
* To be able to evaluate theories of why we act aggressively.

**Learning activity**

* Show students video clips demonstrating both behaviours – discuss.
* Brainstorm: Why do we act aggressively in sport?
* Introduce students to the theories of aggression and ask them to apply to their own sporting examples.
* Link back to Bandura’s Social Learning Theory of personality that people can learn aggressive behaviour.

**Resources**

* [’Aggression in Sport’ (YouTube)](https://www.youtube.com/watch?v=DlrTha8cbAI)
* [’Theories of Aggression in Social Psychology’ (YouTube)](https://www.youtube.com/watch?v=SNWW-pPmTsI)
* **2018 Paper 2 (Synoptic) adapted question** Instinct theory and the frustration-aggression hypothesis are psychological theories relating to aggression in sport. Use these theories to analyse why aggressive acts still exist in football and evaluate the effectiveness of strategies used to prevent player violence.(15 marks)

**Please note that the last resource in this section has been adapted because of copyright.**

**Motivation**

**Specification content**

* Intrinsic
* Extrinsic
* Tangible
* Intangible

**Learning outcome**

To be able to define and understand the different types of motivation.

**Learning activity**

* Why do they take part in sport?
* Classify groups responses into the types of motivation.

**Resources**

* [‘What’sThe Best Motivation For Athletes?’ (Peak Performance Sports)](https://www.peaksports.com/sports-psychology-blog/whats-the-best-motivation-for-athletes/)
* **2019 AS Paper (Synoptic)** In 2018, Alexis Sánchez became the highest earner in the Premier League with a reported wage of £350 000 per week. Evaluate the impact that wages associated with modern day professionalism in association football has on the status and motivation of players. (8 marks)

**Achievement motivation theory**

**Specification content**

* Need to achieve (Nach) and need to avoid failure (Naf)
* Incentive value and probability of success

**Learning outcome**

* To know and understand Atkinson’s model of achievement motivation.
* To know the characteristics of personality components of achievement motivation.
* To know strategies to develop approach behaviours leading to improvements in performance.
* To understand the impact of situational component of achievement motivation.

**Learning activity**

* Show the clip of Stuart Pearce missing the penalty in the 1990 World Cup and then scoring in the 1998 European Cup – Nach.
* How would you encourage youngsters to show approach behaviours.
* Place Nach and Naf performers on the graph. Think of sporting examples of how someone could aim for a higher incentive value with less of chance of success eg higher tariff routines in gymnastics.

**Resources**

* [‘Achievement Motivation’ (YouTube)](https://www.youtube.com/watch?v=_25cZYWc5Rs)
* [Achievement motivation and sports article (Neliti)](https://media.neliti.com/media/publications/342728-achievement-motivation-and-sports-0a47bdf3.pdf)

**Specification content**

Impact of outcome orientated goals and task orientated goals.

**Learning outcome**

* To understand achievement goal theory.
* This could be taught alongside goalsetting.

**Resources**

* [’Achievement Goal Theory: Definitions And Examples’ article (Helpful Professor)](https://helpfulprofessor.com/achievement-goal-theory/)
* [’Achievement Goal Theory (AGT) - Ego Goals vs. Task Goals’ (YouTube)](https://www.youtube.com/watch?v=3y1CEFuQPqo)

**Social facilitation**

**Specification content**

* Social facilitation and inhibition
* Zajonc’s model
* Strategies to eliminate the adverse effects of social facilitation and social inhibition
* Evaluation apprehension

**Learning outcome**

To be able to define and distinguish between social facilitation and inhibition.

**Learning activity**

* Introduce the acronym for behavioural effects due to the presence of others (BEDPOO).
* Give a student a task to do in front of the class – do they perform better than normal or worse? Why?
* Link to phase of learning and their dominant response.
* How can we encourage facilitation to occur rather than inhibition? Give all students a task to practise eg cup stacking (they write their best time down).
* Then ask one student at a time to show their effort and grade/score their performance.
* How does the thought of being judged impact you?

**Differentiation and extension**

Link to famous examples of people failing or excelling under pressure and evaluate why.

**Resources**

* [’Social Facilitation (Definition + Examples)’ (YouTube)](https://www.youtube.com/watch?v=DMX565ohxwM)
* [’Social Facilitation Theory in Psychology’ article (Simply Psychology)](https://www.simplypsychology.org/social-facilitation.html)

**Group dynamics**

**Specification content**

Tuckman’s model

**Learning outcome**

To understand group formation and the stages of Tuckman’s model.

**Learning activity**

* Class could be put into groups and given a task. Do they experience any of the stages of Tuckman’s model?
* Discuss and identify characteristics of each stage.

**Resources**

* [’What is the Tuckman Model?’ (YouTube)](https://www.youtube.com/watch?v=YfZhJPeapNk)
* [’Tuckman’s Stages of Team Development in Sport’ article (Athlete Assessments)](https://www.athleteassessments.com/stages-of-team-development-in-sport/)
* [’Remember The Titans - Forming, Storming, Norming, Performing, Adjourning’ (YouTuber)](https://www.youtube.com/watch?v=hEJaz3sinEs)

**Specification content**

Task and social

**Learning outcome**

To understand cohesion.

**Learning activity**

* Give students a task where they have to work together to achieve success. How successful were they and why?
* Define cohesion and discuss the difference between social and task cohesion – show clips of team mates displaying problems with cohesion.
* Can you be successful without cohesion? Which type is more important to successful sports performance?

**Resource**

[’From “Me” to “We”: Promoting Team Cohesion Among Youth Athletes’ article (Sports Psychology)](https://appliedsportpsych.org/blog/2017/10/from-me-to-we-promoting-team-cohesion-among-youth-athletes/#:~:text=Task%20cohesion%20is%20more%20strongly,as%20making%20practice%20plans%20together)

**Specification content**

Steiner’s model of potential and actual productivity, faulty group processes (including cooperation and coordination)

**Learning outcome**

* To know and understand the Ringelmann effect and social loafing.
* To know strategies to improve cohesion, group productivity and overcome social loafing to enhance team performance.

**Learning activity**

* Link to the FA Cup and how underdogs often win. Why?
* Show team lists (lineup) of favourites against relative unknown teams. How is it possible for the underdogs to win? (Eg England vs Iceland/ Wales vs Belgium Euros).
* How can a coach reduce these faulty processes?
* Does double the amount of people mean you go twice as fast?
* Give the class figures of rowing times for two man boats and ask them to predict times for four men and eight men boats. Discuss responses vs actual times.
* Define the Ringelmann Effect.
* How lack of motivation and coordination impacts performance.
* Possibility of practical – give them a task – are there any social loafers? Students in class could take coaches role and attempt some of the strategies.

**Resources**

* [‘Steiners model of group effectiveness’ YouTube)](https://www.youtube.com/watch?v=2m08hED3ZsI)
* **2020 Paper 2** England, ranked 11th in the world, were knocked out of the 2016 European Championships by Iceland, a team ranked 34th in the world. Losing the match 2–1 represented a significant under-achievement for the England football team. Analyse the faulty group processes which could have caused this defeat and the strategies which can be used to address specific faulty processes. (15 marks)
* **2020 AS Paper** Evaluate the impact of strategies a coach may use to avoid social loafing in their team. Use examples from a team game of your choice to support your answer. (8 marks)

**Importance of goal setting**

**Specification content**

Outcome goals, performance related goals and process goals

**Learning outcome**

To know and understand the benefits of types of goal setting.

**Learning activity**

* Why do we set goals? Look at common goals people set for themselves. Why do they often fail?
* Look at Michael Johnson’s article based on setting effective goals and create some goals for your own sporting performance.

**Resources**

* [’Mental Skills Training for Sport and Health’ (Future Learn: Manchester Metropolitan University)](https://www.futurelearn.com/courses/mental-skills-training-sport)
* **2018 AS Paper (Synoptic)** Analyse how athletes could use goal setting to increase the effectiveness of periodisation when training for an Olympic Games. (8 marks)

**Specification content**

SMARTER (specific, measurable, achievable, realistic, time bound, evaluate, re-do)

**Learning outcomes**

* To know and understand the principles of effective goal setting.
* Link to Achievement Goal Theory.

**Learning activity**

* Change poor examples of goals to effective goals.
* Practise setting goals using the SMARTER principle.

**Resources**

**2022 Paper 1 (Synoptic)** A high jumper is experiencing a learning plateau. Evaluate the effectiveness of setting a SMARTER process goal to overcome this learning plateau. Refer to an appropriate goal in your answer. (8 marks)

**Attribution theory**

**Specification content**

* Attribution process
* Link between attribution, task persistence and motivation
* Self-serving bias (attribution retraining)
* Learned helplessness (general and specific)
* Strategies to avoid learned helplessness leading to improvements in performance

**Learning outcome**

To know and understand Weiner’s model and its application to sporting situations.

**Learning activity**

* Look at recent sports results and media interviews. Why did a team win or lose? Ask students about their games.
* Link to Weiner’s model and place examples on the model.
* Students to complete a flow chart based on a recent sporting experience. What happened (success or failure)? Why did you fail/succeed? Analyse your attribution – cause, stability, control. How do you feel about this situation? What if you had to do it again?
* Would this change if the initial outcome was different?
* Using the information from your flow chart, explain self-serving bias and attribution re-training.
* Students to think about something they can’t do. How do they feel about it? If they were asked to do it? Partners to encourage them to believe they can do it. Perhaps changing your belief from general to specific.

**Resources**

* [The importance of attributions (Sports Psychology)](https://www.sportsperformancebulletin.com/psychology/coping-with-emotions/sport-psychology-the-importance-of-attributions)
* **2019 Paper 2** Crystal Palace are a professional football club. The team lost their first seven games of the 2017-2018 English Premier League season. Analyse how the players may have attributed those defeats and the effect this may have had on their performance at that point in the season. Refer to Weiner’s model of attribution theory. (8 marks)
* **2022 Paper 2** A badminton player is suffering from learned helplessness. Analyse the strategies a coach could use to help the player overcome learned helplessness and improve their performance. (8 marks)

**Self-efficacy and confidence**

**Specification content**

Performance accomplishments, vicarious experiences, verbal persuasion and emotional arousal

**Learning outcome**

* To know the characteristics of self-efficacy, self-confidence and self-esteem.
* Bandura’s model of self-efficacy.

**Resources**

* [’Self-efficacy’ (YouTube)](https://www.youtube.com/watch?v=jALf6IZ020M)
* **2018 Paper 2** Mo Farah is a four-time Olympic gold medallist. Before the 10 000 m race at the 2017 World Championships, he said: “I know I am the man to beat but that gives me confidence. I can’t wait to get on that track – bring it on! ” Analyse Mo Farah’s statement using Bandura’s model of self-efficacy and Vealey’s model of self-confidence. (15 marks)
* **2021 Paper 1 (Synoptic)** Studies suggest that children with disabilities report experiencing low self-efficacy when playing sport. Analyse how discrimination, stereotyping and prejudice can explain the children’s low self-efficacy when applied to Bandura’s model. (15 marks)
* **2022 Paper 2 (Synoptic)** Media coverage of professional tennis has increased over the past 20 years. Tennis players are increasingly required to interact with the media in the lead-up to matches. Evaluate the impact the media may have on a professional tennis player’s self-efficacy in an upcoming match. Refer to Bandura’s Model of self-efficacy in your answer. (15 marks)

**Specification content**

Relationship between trait sport confidence, competitive orientation, the sport situation and state sport confidence

**Learning outcome**

To know and understand Vealey’s model of self-confidence.

**Resources**

* [‘Vealey's model of sports confidence’ (YouTube)](https://www.youtube.com/watch?v=UqixWyYIKo0)
* **2018 Paper 2** Mo Farah is a four-time Olympic gold medallist. Before the 10 000m race at the 2017 World Championships, he said: “I know I am the man to beat but that gives me confidence. I can’t wait to get on that track – bring it on!” Analyse Mo Farah’s statement using Bandura’s model of self-efficacy and Vealey’s model of self-confidence. (15 marks)

**Specification content**

Home field advantage

**Learning outcome**

Effects of home field advantage.

**Learning activity**

Look at sports and different tables to show points scored home vs away.

**Resources**

* [Premier League home advantage table (FootyStats)](https://footystats.org/england/premier-league/home-advantage-table)
* [’Home Field Advantage: The Facts and the Fiction’ (Chicago Booth Review)](https://www.chicagobooth.edu/review/home-field-advantage-facts-and-fiction)
* [’WHY footballers win at home and lose away’ (YouTube)](https://www.youtube.com/watch?v=YNBBuNAA9oU)

**Leadership**

**Specification content**

Fiedler’s contingency theory and Chelladurai’s multi-dimensional mode

**Learning outcomes**

* To know and understand leadership styles for different sporting situations.
* Theories of leadership in different sporting situations.

**Learning activity**

Consider different situations, abilities and conditions eg danger, novices and time limits.

**Resources**

* [’Sir Alex Ferguson Secrets of Success Documentary’ (YouTube)](https://www.youtube.com/watch?v=SbtZjIEs5r0)
* **2022 Paper 2** An experienced women’s rugby team is bottom of the league with only a few games left before the end of the season. A new head coach is recruited and chooses to adopt an autocratic leadership style during training sessions and games. Analyse the impact an autocratic leadership style may have on the team. Refer to Chelladurai’s multi-dimensional model in your answer. (15 marks)

**Stress management**

**Specification content**

* Cognitive techniques:
* mental rehearsal
* visualisation
* imagery
* Attentional control and cue utilisation:
* thought stopping
* positive self-talk
* somatic techniques
* biofeedback, centring, breathing control, progressive muscle relaxation

**Learning outcome**

* To be able to define the terms ‘stress’ and ‘stressor’.
* To understand the use of warm up for stress management.
* To know and understand cognitive and somatic techniques.
* To understand the effects of cognitive and somatic techniques on the performer.

**Resources**

* [’Guided Athletic Relaxation: Progressive Muscle Relaxation’ (YouTube)](https://www.youtube.com/watch?v=sb5KzJ8NoP4)
* **2018 Paper 2** The photograph below shows a rugby player preparing to kick a conversion during an important game. The player is having negative thoughts about the kick. He is also experiencing increased heart rate and muscular tension. Evaluate the use of visualisation and centring by the rugby player to ensure the kick is successful. (8 marks)
* **2019 Paper 2 (Synoptic)** A golf coach believes the most important aim of a warm-up is stress management. A rugby coach believes the most important aim of a warm-up is injury prevention. Evaluate these two statements. (15 marks)
* **2021 Paper 2** A diver may use cognitive techniques such as mental rehearsal, visualisation and imagery to manage stress immediately before performance. Analyse how the diver could use other cognitive stress management techniques to improve their performance in a competition. Refer to catastrophe theory in your answer. (8 marks)

**Sport and society and the role of technology in physical activity and sport**

**Concepts of physical activity and sport**

**Specification content**

* Physical recreation
* Sport
* Physical education
* School sport

**Learning outcome**

* To know the characteristics and functions of key concepts and how they create the base of the sporting development continuum.
* The similarities and the differences between these key concepts.

**Learning activity**

* Practise using a Venn diagram.
* Look at past exam questions.

**Resource**

**2019 Paper 2** Amy plays badminton with her friends at the school lunchtime session. She is also a member of her local badminton club where she plays in the local league every weekend. Compare Amy’s experience of badminton as recreation and her experience of badminton as sport and explain how these might impact on her performance. (8 marks)

**Development of elite performers in sport**

**Specification content**

National governing bodies and other sporting organisations

**Learning outcome**

To know and understand the factors required to support progression from talent identification to elite performance.

**Learning activity**

* Relate the model to sport and any other factors required to progress.
* Students to split these factors into personal, social and cultural. Prioritise these factors and justify why.

**Differentiation and extension**

Research the pathway to success of your sporting role model. How did they achieve success?

**Specification content**

* National governing bodies
* National institutes of sport
* UK Sport

**Learning outcome**

To know and understand the generic roles, purpose and the relationship between organisations in providing support and progression from talent identification through to elite performance.

**Learning activity**

* Research an effective Talent ID programme in a sport of your choice. Identify the links with other organisations.
* Produce a presentation, for the rest of the class eg using Prezi, on your findings.

**Resources**

* [’INISDE HALE END - Episode 4 - Talent Identification’](https://www.youtube.com/watch?v=7SOUB4WXDnc)[(YouTube)](https://www.youtube.com/watch?v=7SOUB4WXDnc)
* [‘”A Skeleton For Success” - Talent Identification In Sports’ (Output)](https://www.outputsports.com/blog/a-skeleton-for-success-finding-and-fostering-elite-athletic-performance)

**Specification content**

* National governing bodies
* National institutes of sport
* UK Sport

**Learning outcome**

To know the support services provided by national institutes of sports for talent development.

**Learning activity**

English institute of sport (EIS) performance pathway health check – students to create a Kahoot quiz on the support provided for talent development.

**Differentiation and extension**

Compare with the Australian institute of sport (AIS).

**Resources**

* [Football Association website](https://www.thefa.com/)
* [England Netball website](https://www.englandnetball.co.uk/)
* [UK Sports Institute website](https://uksportsinstitute.co.uk/)
* [UK Sport website](https://www.uksport.gov.uk/)
* **2021 Paper 2** Analyse how support provided by the National Institutes of Sport has helped to improve the performance of British elite track cyclists. (15 marks)

**Specification content**

* National governing bodies
* National institutes of sport
* UK Sport or equivalent current named programmes

**Learning outcome**

To know the key features of UK sport’s world class performance programme, Gold event series and talent identification and development.

**Learning activity**

Possible option of a guest speaker who has been involved in these programmes.

**Resources**

* [World class programme overview (British Equestrian)](https://www.britishequestrian.org.uk/team/world-class-programme/overview)
* [World class programme announcement 2023-24 (British Athletics)](https://www.britishathletics.org.uk/news-and-features/2023-24-olympic-world-class-programme-announced/)

**Ethics in sport**

**Specification content**

Understanding:

* + Amateurism
	+ The Olympic Oath
	+ Sportsmanship
	+ Gamesmanship
	+ Win ethic

**Learning outcomes**

* To understand the key terms relating to ethics in sport.
* Positive and negative forms of deviance in relation to the performer.

**Learning activity**

* Is the Olympic Oath irrelevant in the modern day Olympics?
* Examples of sportsmanship and gamesmanship in your sport
* Give examples of deviance in sport – students to sort into positive and negative and justify why.

**Differentiation and extension**

Write a school sport oath.

**Resources**

* [The Olympic Oath - Opening Ceremony - London 2012 Olympic Games (YouTube)](https://www.youtube.com/watch?v=-HlTciqDbkE)
* **2022 paper 2** One football coach believes in the importance of winning fairly so encourages their players to demonstrate sportsmanship. Another coach believes the win ethic is more important so encourages their players to use gamesmanship. Evaluate these views in relation to professional football. (8 marks)

**Violence in sport**

**Specification content**

* Performer
* Spectator
* Sport

**Learning outcome**

* To know and understand the causes and implications of violence in sport.
* Strategies for preventing violence within sport to the performer and spectator.

**Learning activity**

* Watch video clips of violence in sport – suggest reasons for these acts.
* Pick one of the major spectator sports and research how they aim to reduce violence within sport.

**Resources**

* [Why is football violence increasing? A talkSPORT & The Times investigation (YouTube)](https://www.youtube.com/watch?v=ub1e9Jc205k)
* **2018 Paper 2 (Synoptic) adapted question** Instinct theory and the frustration-aggression hypothesis are psychological theories relating to aggression in sport. Use these theories to analyse why aggressive acts still exist in football and evaluate the effectiveness of strategies used to prevent player violence.(15 marks)

**Drugs in sport**

**Specification content**

* Erythropoietin (EPO), anabolic steroids, beta blockers
* Physiological adaptations:
	+ social and psychological rewards (for the sport and the performer)
	+ negative impact on current and future health
	+ social and psychological repercussions (for the sport and the performer)
* Testing procedures will not be examined

**Learning outcomes**

* To know and understand the social and psychological reasons behind elite performers using illegal drugs and doping methods to aid performance.
* The physiological effects of drugs on the performer and their performance.
* The positive and negative implications to the sport and the performer of drug taking.
* Strategies for elimination of performance enhancing drugs in sport.
* Arguments for and against drug taking and testing.

**Learning activity**

* Discussion/debate for the acceptance of drugs in sport. Why not allow them?
* Match athletes who have been banned for using these drugs to the drug type to suggest effects of them. Research effects of the drugs.
* Students to create warning tweets to fellow athletes about the dangers associated with these drugs.
* Case study of cycling. How has it been affected by drug scandals? Also, look into the impressive achievements of some of its athletes.
* Use the ‘100% me’ websites to create a poster/information leaflet about eliminating drugs from sport.
* Research how governing bodies have dealt with athletes caught taking drugs.
* Discussion/debate for the acceptance of drugs in sport. Why not allow them?

**Resources**

* [Icarus official trailer (YouTube)](https://www.youtube.com/watch?v=qXoRdSTrR-4)
* [’Lance Armstrong - Cycling's Greatest Fraud in History’ (YouTube)](https://www.youtube.com/watch?v=QNP7CeVc3c4)
* [’Doping in sport: why it can't be stopped’ (YouTube)](https://www.youtube.com/watch?v=z466itSHE58)
* **2018 Paper 2** An elite weight lifter is taking part in a strength-training programme to improve performance in the next competition. As part of the programme, the weight lifter is considering taking creatine and anabolic steroids in addition to weight training. Evaluate the use of creatine and anabolic steroids to improve the weight lifter’s performance in the next competition. (8 marks)
* **2019 Paper 2** Russia did not compete in the 2018 Winter Olympic Games due to allegations of drug taking. Analyse the social, physiological and psychological reasons for an athlete to take drugs and the short term and long term implications this could have. (15 marks)
* **2020 Paper 2** By August 2019, 69 athletes had failed drugs tests using samples taken during the London 2012 Olympics. Evaluate the effectiveness of strategies used for eliminating the use of performance enhancing drugs in sport. (15 marks)
* **2021 Paper 2 (Synoptic)** In 2012, Lance Armstrong was stripped of his seven Tour de France titles and given a lifetime ban for using banned substances including erythropoietin (EPO). Evaluate the choice made by other professional cyclists to inject EPO instead of relying on altitude training alone to improve performance. Refer to the physiological effects of EPO on the cyclist in your answer. (8 marks)

**Sport and the law**

**Specification content**

* Performers (contracts, injury, loss of earnings etc)
* Officials (negligence)
* Coaches (duty of care)
* Spectators (safety, hooliganism etc)

**Learning outcome**

To know the uses of sports legislation.

**Learning activity**

* Discussion of why those involved in sport may need protection from the law during their careers – use current affairs. Consider the recent case of abuse in football.
* Research two examples of professional athletes who have used the law to help them after career ending injuries or where claims have been made against officials or coaches. Present your findings.
* Compare images of spectators at football matches pre Hillsborough to today. What differences are they aware of? Create a timeline of crowd safety legislation. Possibility of creating a quiz or questions to accompany the timeline for a partner to answer.

**Resource**

[How the Bosman ruling has changed free agency - ESPN FC (YouTube)](https://www.youtube.com/watch?v=q2wCLSzouGg)

**Impact of commercialisation on physical activity and sport, and the relationship between sport and the media**

**Specification content**

* Performer
* Coach
* Official
* Audience
* Sport

**Learning outcome**

To understand the positive and negative impact of commercialisation, sponsorship, and the media.

**Learning activity**

* Analyse the earning of top athletes and consider how much is from success in their sport and how much comes from commercialisation.
* Possibility of a class debate. Half of the group to research and argue that positive impact of commercialisation and half the negative impact in relation to all roles.
* Students to complete a summary learning mat.

**Resources**

* [’Jamie Reuben: How the $300M Takeover Happened; The Story Behind Eddie Howe’s Appointment - Ep. 1’ (YouTube)](https://www.youtube.com/watch?v=PsX5uw0KkJs&list=PLKfa3cSk0ISmLiwd4PGur0snyIJvRlnyv)
* [’How Do the Olympics Make Money? The Olympics Business Model, Explained’ (YouTube)](https://www.youtube.com/watch?v=Nyta8HjvW_U)
* [The business of football (OpenLearn)](https://www.open.edu/openlearn/money-business/the-business-football?active-tab=description-tab)
* **2018 AS Paper** TABLE 1 shows the winning times for the men’s 100 metres final from previous Olympic Games.

**TABLE 1**

|  |  |
| --- | --- |
| **Year** | **Time completed (s)** |
| 1952 | 10.40 |
| 1964 | 10.00 |
| 1976 | 10.06 |
| 1988 | 9.92 |
| 2000 | 9.87 |
| 2012 | 9.63 |
| 2016 | 9.81 |

Consider how commercialisation and the improvement in technology for sports analytics have affected performance in the 100 metres at the Olympic Games. Use the data in TABLE 1 to support your answer. (8 marks)

* **2020 Paper 2** Income from commercialisation has made an impact on sport. The graph below shows the income from Premier League television broadcasting rights over a 27-year period.



Evaluate the impact of commercialisation on professional football since the Premier League was formed in 1992. Refer to the graph above in your response. (8 marks)

* **2022 Paper 2 (Synoptic)** Media coverage of professional tennis has increased over the past 20 years. Tennis players are increasingly required to interact with the media in the lead-up to matches. Evaluate the impact the media may have on a professional tennis player’s self-efficacy in an upcoming match. Refer to Bandura’s Model of self-efficacy in your answer. (15 marks)

**The role of technology in physical activity and sport**

**Specification content**

* Understanding of technology for sports analytics
* Use of technology in data collection (quantitative and qualitative, objective and subjective, validity and reliability of data), video and analysis programmes, testing and recording equipment (metabolic cart for indirect calorimetry), use of GPS and motion tracking software and hardware, maintaining data integrity

**Learning outcome**

To know and understand the types and use of data to optimise performance.

**Learning activity**

* Potential for guest speaker or visit to sports club/University sports science department to look at analysis first hand.
* Introduce key words such as quantitative and qualitative.
* Students to undertake fitness tests (possibly with KS3 students), they must ensure tests are valid and reliable. Show video tests and feedback to group who will assess their validity and reliability.
* Students conduct a project to research the use of a specified piece of technology used in sports analytics and present. Link to a team or athlete that uses the technology.

**Resources**

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**TABLE 1**

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Consider how commercialisation and the improvement in technology for sports analytics have affected performance in the 100 metres at the Olympic Games. Use the data in TABLE 1 to support your answer. (8 marks)

* **2018 Paper 2 (Synoptic)** GPS technology is becoming more popular with sports teams to analyse players ’ movements in training and during games. Evaluate the use of GPS technology and the data it provides. (8 marks)

**Specification content**

* Monitor fitness for performance
* Skill and technique development
* Injury prevention
* Game analysis
* Talent ID/scouting

**Learning outcome**

To know and understand the functions of sports analytics.

**Learning activity**

* Use sports analysis software during a live game or skill practice of your choice and feedback to the group.
* Use dartfish/upmygame.
* Possibility of using it to aid practical assessment
* Research a device that monitors fitness for performance and try to sell it to the group (management team).

**Resource**

**2020 paper 1 (Synoptic)** Developments in video and analysis programmes have changed how coaches provide feedback to performers. Evaluate the impact of these developments on a coach’s ability to provide effective feedback to an athlete in the cognitive stage of learning. (8 marks)

**Specification content**

* Impact of material technology on equipment – adapted (disability, age etc)
* Facilities – Olympic legacy, (surfaces, multiuse etc)

**Learning outcome**

To understand the development of equipment and facilities in physical activity and sport, and their impact on participation and performance.

**Learning activity**

* Compare old equipment to new records on old surfaces, then compare to new records and with older equipment.
* Presentation/research on how Olympic facilities are now being used.

**Resources**

* [’The Controversy Behind Nike’s Vaporfly Running Shoe, Explained’ (YouTube)](https://www.youtube.com/watch?v=wVXrIaPuP7c)
* [’Controversial swimsuit’ (YouTube)](https://www.youtube.com/watch?v=ck-G3-EE4nQ)

**Specification content**

* Sport
* Performer
* Coach
* Audience

**Learning outcome**

To know and understand the role of technology in sport and its positive and negative impacts.

**Learning activity**

Show examples of when technology has helped or hindered sport. Should replays be used in football? Compare with use in rugby and hockey and suggest when it should be used in football. How will it impact the different roles?

**Resource**

[’Technology in Sport’ (YouTube)](https://www.youtube.com/watch?v=ZaaIIEANc0I)