

Scheme of work: Applied anatomy and physiology

This resource gives you a course overview and a scheme of work to support your teaching of our AS Physical Education (7581).

Course overview

	Hours					
	1	2	3	4	5	
	3.1.3 Sport and society	3.1.1 Applied anatomy ar	nd physiology	3.1.2 Skill acquisitio	n	Key dates/
	3.1.7 Sport and society	3.1.4 Exercise physiolog	у	3.1.6 Sport psycholo	рду	documents
Week	and the role of technology in physical activity and sport	3.1.5 Biomechanical mov	vement			
1	3.1.3.1 Emergence of	3.1.1.1 Cardio-respiratory	system	3.1.2.1 Skill, skill continuums and trans		
2	globalisation of sport in the	3.1.1.2 Cardiovascular sys	cular system of skills			
3	industrial and 3.1.3.1.2 Industrial and post-	strial and 3.1.3.1.2		3.1.2.2 Impact of skill structure of practice for	classification on or learning	
4	industrial)			3.1.2.4 Use of guidan	ce and feedback	
5						
6		3.1.1.3 Respiratory system	ı	3.1.6.1.6 Motivation		
7				3.1.2.3 Principles and and performance	I theories of learning	

		October half-ter	m	
8 9 10	3.1.3.1 Emergence of globalisation of sport in the 21st century (3.1.3.1.3 Post World War II)	3.1.1.4 Neuromuscular system		
11 12 13 14	3.1.3.2.1 Sociological theory applied to equal opportunities	3.1.4.2 Preparation and training methods in relation to maintaining physical activity and performance	 3.1.6.1.1 Aspects of personality 3.1.6.1.2 Attitudes 3.1.6.1.3 Arousal 1.6.1.4 Anxiety 3.1.6.1.5 Aggression 	
		Christmas holida	ys	
15 16		Performance analysis assessment (analysis and evaluation)		Mock exams
18 19 20		3.1.4.1 Diet and nutrition and their effect on physical activity and performance		
		February half-ter	m	
21 22 23	3.1.7.1 The role of technology in physical activity and sport	3.1.1.5 The musculo-skeletal system and analysis of movement in physical activities	3.1.6.1 Psychological factors that can influence an individual in physical activities3.1.6.1.7 Social facilitation	Moderation
		3.1.5.2 Levers	3.1.6.1.8 Group dynamics	



3.1.1 Applied anatomy and physiology/ 3.1.4 Exercise physiology/ 3.1.5 Biomechanical movement

3.1.1.2 Cardiovascular system

	Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
1	To understand the impact of physical activity and sport on health and fitness.	Recap prior knowledge in relation to definitions (and units where needed) for health, fitness, physical activity heart rate, stroke volume, cardiac output, systole and diastole. Impact on health. Impacts on fitness. Use graphs to compare cardiac output for different intensities of exercise and trained and untrained.	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). Fitness (cardiac output – trained and untrained individuals, maximal and sub- maximal exercise).	Other health related diseases associated with physical inactivity.	Sample Assessment Material – AS Paper Question 03
2	To understand how the heart contracts in relation to the cardiac conduction system.	Teach the cardiac conduction system (SA node, AV node, bundle of His, Purkinje fibres). Structure of the heart in relation to the conduction system and the order. Use diagram and order cards.	The hormonal, neural and chemical regulation of responses during physical activity and sport (Cardiac conduction system).	Structure of the heart.	Heart diagram and Order cards. Sample Assessment Material – AS Paper Question 01
3	To understand the hormonal, neural and chemical regulation of heart rate prior to exercise. To understand how the nervous system regulates heart rate during physical activity and sport.	Recap prior knowledge in relation to cardiac conduction system. Anticipatory rise. Introduce the receptors. Sympathetic and parasympathetic nervous system regulating heart rate.	The hormonal, neural and chemical regulation of responses during physical activity and sport (Sympathetic and parasympathetic, Carbon dioxide, Anticipatory rise). Receptors involved in regulation of responses during physical activity	Other changes in the body during physical activity that are regulated by the nervous system.	Glossary of key terms.

			(Chemoreceptor, proprioceptor, baroreceptor).		
4	To know how and why blood redistribution changes in different locations of the body during physical activity and sport. To understand how blood is redistributed during physical activity and sport.	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.	The hormonal, neural and chemical regulation of responses during physical activity and sport. Redistribution of blood (vascular shunting, vasoconstriction, vasodilation).	Research or link to the vasomotor control centre in the medulla oblongata.	Blood redistribution table. Glossary of key terms.
5	To understand how oxygen is transported. To be able to explain the Bohr shirt in relation to oxygen transport (haemoglobin and myoglobin) during exercise.	Transport of oxygen in the blood and muscles. Hemoglobin curve at rest. Introduce the Bohr shift and how and why the curve changes during exercise. Significance of the myoglobin curve.	Transportation of oxygen. (Haemoglobin, Myoglobin, Oxyhaemoglobin disassociation curve, Bohr shift).	Reasons why more oxygen is released during high temperature/ exercise and acidic conditions.	Haemoglobin and myoglobin curves graph.
6	To know the venous return mechanisms. To understand Starling's law of the heart.	Recap prior knowledge of veins and their structure/ characteristics. Link to the venous return mechanisms. Mechanisms and relationship with blood pressure. Pupils could take their blood pressure. Starling's law of the heart explanation.	Venous return mechanisms, Relationship with blood pressure (systolic, diastolic). Starling's law of the heart.	Pose the question in preparation for next lesson's topic on Cardiovascular Drift. What happens to your stroke volume if venous return decreases? When might this occur?	
7	To understand what is meant by the term cardiovascular drift and why it occurs during	Recap definition and units for heart rate, stroke volume, cardiac output and the relationship between them.	Cardiovascular drift.	Attempt or set up a practical task to see if you can observe the	Graph of cardiovascular drift.

	physical activity and sport.	Cardiovascular drift using the graph as a visual.		phenomenon.	
8	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.	 Introduce arterio-venous oxygen difference (A-VO2 diff) as a term and the units. Recap role of arteries and veins. Study diagrams (Appendix 5) to show variations in trained and untrained and during exercise sessions of differing intensities. Adaptations to body systems that occur as a result of training and account for the differences in A-VO2 diff. 	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.	Link adaptations to the variations in trained and untrained.	
	Students should understar exercise, during exercise of taking part in physical activi	nd the relationship between the cardiovascular and r f differing intensities and during recovery allow the bod ity and sport, as part of a healthy lifestyle, can have a	espiratory systems and how chains of exercises by to meet the demands of exercises positive effect on these systems.	anges within these sy se. They should also u	ystems prior to Inderstand how

3.1.1.3 Respiratory system

	Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
1	To be able to define the lung volumes. To label a spirometer trace and explain the effects of exercise on volumes and minute ventilation.	Match up lung volumes and minute ventilation to definitions. Label spirometer trace at rest. Discuss changes to trace during physical activity and sport.	Understanding of lung volumes and the impact of and on physical activity and sport (Residual volume, Expiratory reserve volume, Inspiratory reserve volume, Tidal volume) Minute Ventilation.	Measure own levels of tidal volume using the lung volume bags.	Sample Assessment Material – AS Paper Question 05.1, 05.2 A-level Paper

					1 Question 01 Blank spirometer trace, match up definitions.
2	To understand how gases are exchanged at the muscles and the lungs.	Show an image of capillary locations – What occurs here? Link back to AVO2 Diff. How does haemoglobin pass the oxygen into the muscles and carbon dioxide into the lungs?	Gas exchange systems at alveoli and muscles. Oxygen and carbon dioxide. Principles of diffusion and partial pressures.		
3	To understand the hormonal, neural and chemical regulation of pulmonary ventilation during physical activity and sport.	Recap receptors and neural control systems from cardiovascular system – identifying those which are hormonal, neural and chemical.	The hormonal, neural and chemical regulation of pulmonary ventilation during physical activity and sport. Consider adrenaline, sympathetic and parasympathetic systems and carbon dioxide. Receptors involved in regulation of pulmonary ventilation during physical activity (Chemoreceptor, proprioceptor, baroreceptor).	Link to the different muscles involved during respiration at rest and exercise.	
4	To understand the impact of smoking on the respiratory system and oxygen transport.	Pupils research and investigate the impact of smoking on the respiratory system and produce a poster to display their findings.	Impact of poor lifestyle choices on the respiratory system (Smoking, Oxygen transport).		

	Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
1	To be able to identify the different types of muscle fibre and their associated characteristics.	Introduce different fibres in relation to their characteristics, functions and the activities they're used in. <u>YouTube: Muscle Fibers Explained - Muscle</u> <u>Contraction and Muscle Fiber Anatomy</u> Match up activity to test their understanding. Match the characteristic or function to the fibre type.	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).	Look into how fibres may change or adapt with long term training, eg how type IIx could become more like type IIa.	Sample Assessment Material – A Level Paper 1 Question 04.1
2	Introduction to the nervous system.	Role of the sympathetic and parasympathetic nervous system in relation to sporting activity. <u>YouTube: Parasympathetic Nervous System Crash</u> <u>Course</u>	Nervous system. Sympathetic and parasympathetic.	Explain the role of each in changing heart rate and breathing rate.	Sample Assessment Material – A Level Paper 1 Question 03.2
3	Role of proprioceptors in PNF.	Description of PNF – practical demonstration. Introduction of 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? Pupils to create their own instructional video on PNF	Role of proprioceptors in PNF Muscle spindles. Golgi tendon organ.		
4	The recruitment of muscle fibres.	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	The recruitment of muscle fibres and the frequency of impulses. Motor units.	Give the examples and ask pupils to explain them (reversal of task).	Sample Assessment Material – AS Paper Question 07

 Practical opportunity: 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 the summation graphs. 	Wave summation. All-or-none law. Tetanic.		
muscle groups (larger muscle groups have more motor units). Practical opportunity:	All-or-none law.		
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 the summation graphs.			

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

	Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
1	Understanding key data terms for laboratory conditions and field tests.	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.	Understanding key data terms for laboratory conditions and field tests (Quantitative and qualitative, Objective and subjective, Validity and reliability).	Glossary of terms	
2	Physiological effects and benefits of a warm-up and cool down.	Changes to the body when we are actively warming up/cooling down – what do each of these changes cause? Stretching as an important part of both elements – types of stretching defined, explained, who for? Create a suitable warm–up and cool down for your sport and level of performance.	Physiological effects and benefits of a warm-up and cool down. Stretching for different types of physical activity (static and ballistic).	Differentiation: Give reasons and match with the effect of warming up and cooling down.	Sample Assessment Material – AS Paper Question 06
3	Principles of Training.	Training will only improve performance if the Principles are followed. Give a working example of a training programme and ask pupils to read through and highlight where they see examples of the principles. Produce their own training programme for a period of time in their sport.	Principles of training. Specificity, progressive overload, reversibility, Recovery. Frequency Intensity Time Type of training (FITT) principles.	Glossary of terms – principles.	
4	Define periodization. Application of principles of	Use of Olympic athlete, eg Mo Farah, Usain Bolt, Andy Murray and look at their sporting years. How can they ensure their performance peaks for each major tournament/competition?	Application of principles of periodisation (Macro cycle, Meso cycle, Micro cycle.	Glossary of terms.	

	periodisation.	Possibility of relating it to their school year and peaking for assessment points/exams. How does training change throughout these periods – characteristics.	Preparation, competition, transition Tapering, peaking).		
5	Knowledge of Training methods to improve physical fitness and health.	Specificity – training should improve the components of fitness included in your sport. Complete a fitness profile of your sport. (Provide an example for pupils). Introduction to training methods – possible practical session.	Training methods to improve physical fitness and health. Interval training (anaerobic power). Continuous training (aerobic endurance). Fartlek (aerobic endurance).	Glossary of training methods.	Sample Assessment Material – A Level Paper 2 Question 02
6	Knowledge of Training methods to improve physical fitness and health.	Which training method should I use for my sport? Produce a presentation or training guide for your sport.	Training methods to improve physical fitness and health. Weight training (strength). Proprioceptive Neuromuscular Facilitation (PNF) (flexibility).		

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

	Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
1	To understand the exercise-related function of food classes.	Pupils conduct research activity on the exercise related function of each of the food classes and then produce a presentation.	Understand the exercise- related function of food classes (Carbohydrate. Fibre. Fat (saturated fat, trans fat	Glossary of components and their functions.	

			and cholesterol), protein, vitamins (C, D, B-12, B- complex), minerals (sodium, iron, calcium), water (hydration before, during and after physical activity).		
2	To understand the exercise-related function of food classes.	Pupils conduct research activity on the exercise related function of each of the food classes and then produce a presentation. Look at the content of their food and see which nutrients they are consuming. Could be done through top trumps game (possible starter activity).	Understand the exercise- related function of food classes (Carbohydrate. Fibre. Fat (saturated fat, trans fat and cholesterol), protein, vitamins (C, D, B-12, B- complex), minerals (sodium, iron, calcium), water (hydration before, during and after physical activity).		
3	To know the positive and negative effects of dietary supplements/manipulation on the performer.	Pupils to research the use of these methods in sport. Why would athletes use these methods? What are the issues surrounding dietary manipulation?	Positive and negative effects of dietary supplements/ manipulation on the performer (creatine, sodium bicarbonate, caffeine, glycogen loading).	Link to specific sporting activities.	
4	To know the positive and negative effects of dietary supplements/manipulation on the performer.	Which athlete would use which method and why? Matching exercise.	Positive and negative effects of dietary supplements/ manipulation on the performer (creatine, sodium bicarbonate, caffeine, glycogen loading).	Link to specific sporting activities.	

3.1.5.2 Levers

	Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
1	To know the types of joint, the articulating bones, main agonists and antagonists at the shoulder, elbow, hip, knee and ankle.	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. Give a number of sporting movements and ask students to label the different elements, eg agonist, articulating bones, joint type. Ensure images show the variety of muscle contractions for explanations. How does the agonist change depending on the type of contraction?	Types of joint, articulating bones, main agonists and antagonists, types of muscle contraction (Isotonic (concentric and eccentric), isometric).	Glossary.	Skeleton bones and muscles blank sheets.
2	To know the planes and axes of the body. To understand joint actions. To be able to identify the	Recap prior understanding of joint actions using match up card, planes and axes using diagrams. Pupils could create their own using toilet roll centre and pieces of card (planes) straws (for axes). Analyse a variety of sporting actions of the shoulder and elbow and identify the joint action, articulating	Joint actions in the sagittal plane/transverse axis. Shoulder (flexion, extension and hyperextension). Elbow (flexion and extension). Joint actions in the frontal	Application of joint action understanding to research their own sporting examples.	Joint actions match up cards and planes and axes diagrams.

	joint actions that occur at the shoulder and elbow. To apply your understanding of joint actions at the shoulder and elbow to sporting examples.	bones, main agonists and antagonists.	plane/sagittal axis. Shoulder adduction and abduction). Joint actions in the transverse plane/longitudinal axis. Shoulder (horizontal abduction and adduction).		Sample Assessment Material – A Level Paper 1 Question 03.1
3	To be able to identify the joint actions that occur at the hip, knee and ankle. To apply your understanding of joint actions at the hip, knee and ankle to sporting examples.	Analyse a variety of sporting actions of the hip, knee and ankle and identify the joint action, articulating bones, main agonists and antagonists.	Joint actions in the sagittal plane/transverse axis. hip (flexion, extension and hyperextension), knee (flexion and extension). Ankle (plantar flexion and dorsi flexion). Joint actions in the frontal plane/sagittal axis. Hip (adduction and abduction). Joint actions in the transverse plane/longitudinal axis. Hip (horizontal abduction and adduction).	Part completed movement analysis tables.	Sample Assessment Material – AS Paper Question 02, 09
4	Knowledge of what Levers are. State the 3 classes of levers and give a sporting example of each.	Definition of levers. Labelling of the parts of a lever system. Give lever examples and get them to label the Pivot /Load/ Effort. Introduction to the 3 classes together with the rhyme to identify the lever system – 1,2,3, F,L,E Pupils to return to labeled lever systems and identify their class. Sporting examples.	Three classes of lever and examples of their use in the body during physical activity and sport.		

5To understand that different Lever systems have mechanical advantages and disadvantages.Recap of different lever systems. Discussion of advantages and disadvantages using examples.Moontinued davantage und mechanical disadvantage of each class of lever.5To understand that different Lever systems have mechanical advantages and disadvantages.Recap of different lever systems. Discussion of advantages and disadvantages using examples.Moontinued davantage und mechanical disadvantage of each class of lever.	5	To understand that different Lever systems have mechanical advantages and disadvantages.	Recap of different lever systems. Discussion of advantages and disadvantages using examples. Exam questions related to topic.	Mechanical advantage and mechanical disadvantage of each class of lever.		
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3.1.5.1 Biomechanical principles

	Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
1	Define scalars and state the unit and equation of measurement giving examples.	The mathematical quantities that are used to describe the motion of objects can be divided into two categories: a vector or a scalar. Scalars are quantities that are fully described by a magnitude (or numerical value) alone. They have no direction. Show clips of speed measures, eg 100m record, tennis serve speed, distance of throws. Give definitions and figures and ask pupils to calculate figures. Ask pupils to come up with other scalars used in sport.	Definitions, equations and units of example scalars. (Speed, distance).	Compare Scalars to Vectors using sporting examples.	Sample Assessment Material – AS Paper Question 04 The Khan Academy website. GCSE Bitesize for a test.
2	To know Newton's three laws of linear motion.	Option to teach as a practical. Types of force – stations with small activity for pupils to identify the force causing movement (muscular, air resistance, gravity, friction, ground reaction force). Pose the question, what will happen to the object if	Newton's three laws of linear motion applied to sporting movements. (First law (inertia), second law (acceleration), third law (action/reaction). Force.	Identify moments in your sport where each of Newton's Laws occur.	Sample Assessment Material – AS Paper Question 08

		no force acts on it? Do with a still object/moving object (eg, tennis ball) What forces are acting on the ball? Why would it be harder to move a shot than the tennis ball? Netball bounce pass – why does the ball bounce up into the hands of the other player when done correctly and not if done poorly?		
3	To be able to apply Newton's three laws to sporting movements.	Create a presentation on Newton's Laws in your sport explaining the forces and how they would change the outcome of events. Use video clips to make your presentation more appealing. Suggest use of Prezi.	Newton's three laws of linear motion applied to sporting movements. (First law (inertia), second law (acceleration), third law (action/reaction). Force.	
4	To state and explain how and why factors affect stability.	Wrestlers – Fork and cork test (ask pupils to balance cork on their nose (difficult) then give to forks to make it more stable) – relate to sumo wrestlers. Gymnasts – show <u>balance beam recovery video</u> High jump – <u>YouTube: Excellent video clip</u> <u>explaining COM - Dick Fosbury</u> Consider the location of their Centre of Mass and how it helps their events.	Centre of mass. Factors affecting stability. Height of centre of mass, area of base of support, position of line of gravity and body mass.	Sample Assessment Material – AS Paper Question 09

3.1.2 Skill acquisition and 3.1.6 Sport psychology

3.1.2.1 Skill, skill continuums and transfer of skills

	Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
1	To know the characteristics of skill. To be able to classify skills on different skill continua.	Introduce skills and the characteristics. Introduce the skill 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. Pupils move around and check others on a rotation and move any they think are wrong.	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.	Classify their skills.	Pupil Skill Work booklet 3.1.2.1, 3.1.2.2 and 3.1.2.4 - Skill PowerPoint Sample Assessment Material – AS Paper Question 10 Large continua sheets Domino Continuum Set (Tarsia) Colour coded skills to show changes on the continua, eg Swimming Dive/Swimming Stroke.
2	To name and describe the different types of transfer of	Transfer of learning – discussion to lead into the meaning of the term. Image cards used to match up the types of transfer of	Transfer of learning. (Positive, Negative, Zero, Bilateral).	Explain own examples of skills from a variety of	Pupil Skill Work booklet. 3.1.2.1, 3.1.2.2 and 3.1.2.4 - Skill PowerPoint.

learning. Give example of each type transfer from sporting cont	learning as a guided discovery task. S Once paired up, introduce the names of the transfer and ask pupils to try to place the name to the paired cards.	Understanding of how transfer of learning impacts on skill development.	sports.	Images to show transfer of Learning. Triangle Tarsia Jigsaw on whole topic area.
To understan how transfer learning impa on skill development	 Provide pupils then with the information card sort to define the different transfer types. Use PowerPoint to then define and make the notes needed in Pupil Skill Work Booklet. 			

	Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
3	Be able to describe the 3 different methods of presenting a practice. Link each method of presenting a practice to a given skill learning situation. Evaluate the factors to consider in deciding how to	 Practical Lesson. Taking 3 skills that can be easily delivered in an indoor space, teach them using the 3 different methods of presenting practices. Sprint start, Tennis Serve, Triple Jump and Golf Swing are examples of skills that you could use to break skills down. Card sort to break skills down can be given in small groups to help them work on the Progressive Part method. (Tennis serve example). List of skills can be discussed and link method and justify. 	Methods of presenting practice (Whole, Progressive part, Whole–part– whole). Understanding how knowledge of skill classification informs practice structure (presentation and type) to allow learning/ development of skills.	Advantages and disadvantages of each method for different learners/skills.	Pupil Skill Work booklet. 3.1.2.1, 3.1.2.2 and 3.1.2.4 - Skill PowerPoint. Task Cards of skills broken down into parts, eg Tennis serve. Table of Factors to consider.

	present a practice (Including skill classification).			
4	Be able to name and describe the 4 types of practice methods. Link each type of practice to a given skill learning situation. Evaluate the factors to consider in deciding how to present a practice (Including skill classification).	Use the confectionary cards to provoke discussion prior to naming the types of practice (eg skittles have lots of different flavours = variety). Match up the cards then with the description of the practice then with the names of practice types. Skill classification cards then used to match up.	Types of practice. (Massed, Distributed, Variable, Mental practice). Understanding how knowledge of skill classification informs practice structure (presentation and type) to allow learning/ development of skills.	Pupil Skill Work booklet. 3.1.2.1, 3.1.2.2 and 3.1.2.4 - Skill PowerPoint. Sample Assessment Material – AS Paper Question 13.1/13.2 Confectionary discussion picture cards. Use of skill cards to link up with which method would be most suitable.

3.1.2.4 Use of guidance and feedback

	Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
5	Be able to name and describe the 4 types guidance.	Introduce the 4 types of guidance and define each term.	Methods of guidance (Verbal, Visual, Manual, Mechanical).		Pupil Skill Work booklet 3.1.2.1, 3.1.2.2 and 3.1.2.4 - Skill PowerPoint.
		Make use of videos to support the learning of each method and how they develop skills.	Understanding of how guidance impacts on skill		Videos of Each type to be shown.
	Link each method of		development.		Picture boards.

	guidance to a given skill learning situation.	Picture boards available to use and ask pupils to identify each method of guidance being used in the picture.			
6	Be able to name and describe the 6 methods of feedback. Link each type of feedback to a given skill learning situation. Evaluate the factors to consider on deciding on which feedback is most appropriate and how feedback impacts on skill development.	In pairs or small groups, provide pupils with a Scenario/statement card. Display the 6 types of feedback on the board and ask pupils to choose which type of feedback matches their card. Feedback to the whole class and then match up and define each method.	Understand the different purposes and types of feedback (Knowledge of performance, Knowledge of results, Positive and negative, Intrinsic, Extrinsic). Understanding of how feedback impacts on skill development.	Why might feedback change with ability?	Pupil Skill Work booklet. 3.1.2.1, 3.1.2.2 and 3.1.2.4 - Skill PowerPoint. Feedback and Stage of Learning A3 Laminates to write on. Statement/Scenario.

3.1.6.1.6 Motivation

1	Be able to name and define the terms Intrinsic and Extrinsic motivation. Distinguish between Tangible and Intangible motivators with sporting examples.	Why do they participate in sport? What motivates you? Introduction to "Learning" Content to cover the "Motivation to Learn" and definitions explored and examples of each type provided and discussed.	Motivation. Intrinsic, extrinsic, tangible and intangible.	Extension into debate on Intrinsic vs Extrinsic for the high ability. Problems of extrinsic motivation.	Images of types of motivation to group into Intrinsic/Extrinsic and Further into Tangible/Intangible.

3.1.2.3 Principles and theories of learning and performance

	Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
3	Define the term learning plateau. Plot and Identify a plateau on a graph. Evaluate the possible causes of Learning Plateaus and solutions to overcome this (minimum 3 of each).	Learning Plateaus introduced via a data collection/application task. Data given on 50 Free throw Basketball shots recorded over 15 weeks of "learning". Pupils plot the graph and identify the Plateau. Causes and Solutions match up used to separate these and form a discussion.	Learning plateau (Causes and solutions).		Cause and Solution Match up
4	Describe the common characteristics of "Cognitive Theories". Be able to evaluate the use of this theory to explain "Learning" in a given sporting context.	Show the clip of the chimp working out how to get the food. How could this apply to coaching a skill in your chosen sport? <u>YouTube: Insight learning -</u> <u>Chimpanzee Problem Solving</u> Advantages and disadvantages of using such a method to cause learning.	Cognitive theories (Insight learning (Gestalt)). Understanding of how theories of learning impact on skill development.		Sample Assessment Material – A Level Paper 1 Question 12 Video used to describe theory. Kohler Chimpanzees.
5	Describe the common characteristics of "Behaviourism Theories". Be able to evaluate the use of this theory to	Practical within lesson using a reinforce, eg to one pupil, every time they attempt to answer a question give them something. Use the Big Bang Theory clip: <u>YouTube Big Bang Theory-operant</u> <u>conditioning</u>	Behaviourism (Operant conditioning (Skinner). Understanding of how theories of learning impact on skill development.		Video used to describe theory Big Bang Theory:

	explain "Learning" in a given sporting context.	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.			
6	Describe the common characteristics of "Social Learning Theories" Be able to evaluate the use of this theory to explain "Learning" in a given sporting context.	Bobo doll experiment. <u>YouTube: The Bobo Beatdown - Crash</u> <u>Course Pscychology</u> This clip 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.	Social learning (Observational learning (Bandura). Understanding of how theories of learning impact on skill development.		Video used to describe theory.
7	Describe the common characteristics of "Constructivism Theories". Be able to explain the term Zone of Proximal Development (ZPD). Be able to evaluate the use of this theory to	Teach the pupils to juggle to demonstrate the ZPD. Let them try alone without any help for 5 mins 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 pupil in guiding learning.	Constructivism (Social development theory (Vygotsky). Understanding of how theories of learning impact on skill development.	Any pupils who can already juggle can also teach the group.	Video used to describe theory.

given sporting context.	Compare and evaluate all four learning theories in relation to skills being taught and the level of the performer.		

3.1.6.1 Psychological factors that can influence an individual in physical activities

3.1.6.1.1 Aspects of personality

To understand the different schools of thought based on nature vs nurture.	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. Sporting examples of athletes who display different characteristics – What is their personality? Place into introvert or extrovert.	Understanding of the nature vs nurture debate in the development of personality. Trait, social learning.	Glossary of terms.	Interactionist Theory Video
To be able to state the equation for Interactionist Perspective on Personality. State how sports	Introduction to Lewin's Interactionist Perspective – B=f(PxE) Sporting examples of athletes who display different characteristics in different situations - Djokovic is a good example. Pupils to give their own examples.	Interactionist perspective. Hollander, Lewin.	Complete personality test - POMS	

coaches can use their knowledge of this theory to get the best from their performers.	Label Hollander's diagram giving examples . Could link to sports specific personality measure – POMS which supports Hollander's viewpoint. How can a coach use this perspective to get the best from their performer?	How knowledge of interactionist perspective can improve performance.		
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3.1.6.1.2 Attitudes

Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
Knowledge of the Triadic Model and it's 3 components in relation to an attitude object.	Use images to trigger attitudes /opinions of group e.g. spiders, female body builders, fitness tests, homeless people, smokers. Why do pupils have these attitudes towards these attitude objects? (Formation of attitudes). Draw the Triadic model using your attitude to one of the above then apply it to a sporting situation.	Triadic model. Components of an attitude. Formation of attitudes.	Glossary of components.	Sample Assessment Material – AS Paper Question 15 Triadic Model Giant wall display to make and use in lesson.
Knowledge of how to change an attitude.	Recap model components - place the labels onto the blank diagram of the Triadic model Persuasion – Pupils 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	Changing attitudes through cognitive dissonance and persuasive communication.	Glossary.	

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?		

3.1.6.1.3 Arousal

Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
Knowledge of the 3 theories of arousal - Drive theory, inverted U theory, catastrophe theory and zone of optimal functioning theory.	Definition of arousal – link to peak flow and being in the zone.	Theories of arousal (Drive theory, inverted U theory).		Arousal graphs and headings
	Rate a list of events/situations on a continuum as to which would make you least and most stressed.	Practical applications of theories of arousal and their impact on performance.		match up.
	Provide images of the graphs for the 3 theories – match the theory explanation to the graph.			
	Discuss theory in relation to phase of learning and how this changes optimum arousal for peak performance.			
State situations where the the the the the the the the the th	Show video clips demonstrating varied levels of arousal and possible outcomes in sport.	Theories of arousal (catastrophe theory and zone of optimal functioning theory).	Link to cognitive and somatic anxiety – is one worse for performance?	
	How does the activity impact level of arousal?	Practical applications of theories of arousal and their		

On the inverted U Graph, sh optimum arousal may chang boxer/rugby player/gymnast	impact on performance. je for a /archer. Characteristics of peak flow experience.	Peak Flow Video.
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3.1.6.1.4 Anxiety

Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
Knowledge of types of anxiety. Somatic, cognitive, competitive trait and competitive state.	Possible role play – Teacher to enter class and say 'test today which counts for final grade' How did pupils feel? Research the different types of anxiety and how they are measured. Rate your anxiety and compare to results from completing anxiety questionnaire.	Types of anxiety. Somatic, cognitive, competitive trait and competitive state.		Sample Assessment Material – AS Paper Question 14
How do we measure anxiety? What are the issues surrounding this?	Did you results show an accurate reflection of you? How else can we measure anxiety, especially if some of the effects are internal? Introduction to Biofeedback Summarise advantages and disadvantages of methods.	Advantages and disadvantages of using observations, questionnaires and physiological measures to measure anxiety.		Laminated examples of questionnaires.

Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
To be able to distinguish between Aggression and Assertion in sport. Evaluate theories of why we act aggressively.	Video clips demonstrating both behaviours – discuss. Brainstorm: Why do we act aggressively in sport? Introduction of theory – apply to your own sporting example. Link back to Bandura's Social Learning Theory of personality that people can learn aggressive behaviour.	Difference between aggression and assertive behaviour. Theories of aggression (Instinct theory, frustration aggression hypothesis).		Sample Assessment Material – AS Paper Question 16 Video of aggressive acts. Frustration flow
State strategies to control aggression.	What can we do to reduce aggression in sport?	Theories of aggression (social learning theory and aggressive cue theory). Strategies to control aggression.	How have governing bodies dealt with aggressive acts.	

3.1.6.1.7 Social facilitation

Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
Define and distinguish between Social Facilitation and Social Inhibition.	Introduce the acronym BEDPOO. Give a pupil a task to do in front of the class – do they perform better than normal or	Social facilitation and inhibition. Zajonc's model. Strategies to eliminate the adverse effects of social facilitation and social inhibition.		Videos of penalty misses/Top players thriving under pressure (Ian Poulter).

	worse? Why? Link to phase of learning and their dominant response. How can we encourage facilitation to occur rather than inhibition?			
Understand the concept of Evaluation Apprehension and its impact on different performers.	Give all pupils a task to practice, eg cup stacking. Then ask one pupil at a time to show their effort and you are going to grade/score their performance. How does the thought of being judged impact you?	Evaluation apprehension.	Link to famous examples of people failing or excelling under pressure and evaluate why.	

3.1.6.1.8 Group dynamics

Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
Know the stages of Tuckman's group formation and the characteristics of each stage.	Introduce video clips from 'Remember the Titans' movie - <u>YouTube: Remember</u> <u>the Titans</u> Discuss and identify characteristics of each stage.	Group formation. Tuckman's model.	Does every group go through every stage? Consider why.	Giant Display to cut out and use in lessons. Sample Assessment Material – AS Paper Question 11
Define cohesion and distinguish between the types.	Give pupils 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. Task and social. Strategies to improve cohesion to enhance team		Sample Assessment Material – AS Paper Question 17

	cohesion – show clips of team mates displaying problems with cohesion. Can you be successful without cohesion?	performance.		
	Which type is more important to successful sports performance?			
Steiner's Model.	Link to the FA Cup and how underdogs often win. Why? Show team lists (lineup) of favourites against relative unknown team. How is it possible for the underdogs to win? (England vs Iceland Euros). How can a coach reduce these faulty processes?	Steiner's model of potential and actual productivity, faulty group processes (Including cooperation and coordination). Strategies to improve group productivity		
		enhanced team performance.		
Ringlemann Effect.	Does double the amount of people mean you go twice as fast? Give class figures of rowing times for 2 man boats and ask them to predict times for 4 men and 8 men. Discuss responses vs actual time.s Define the Ringlemann Effect. How lack of motivation and coordination impacts performance	Ringelmann effect and social loafing.	Glossary of terms.	
Identify ways to reduce social loafing.	Possibility of practical – give them a task – are there any social loafers? Pupils in class could take coaches role and attempt some of the strategies.	Strategies to overcome social loafing to enhance team performance.		

3.1.6.1.9 Importance of goal setting

Learning objective	Learning activity	Specification content	Differnetiation and extension	Resources
To distinguish between types of goals.	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.	Benefits of types of goal setting. Outcome goals, task orientated. Performance related goals, process goals.	Glossary.	pponline.co.uk Goal setting
How to ensure goal setting is effective.	Change poor examples of goals to effective goals. Using the SMARTER principle.	Principles of effective goal setting. SMARTER (specific, measurable, achievable, realistic, time bound, evaluate, re-do).		

3.1.3 Sport and society, 3.1.7 Sport and society and the role of technology in physical activity and sport

3.1.3.1 Emergence of globalisation of sport in the 21st century

3.1.3.1.1 Pre-industrial (pre-1780)

	Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
1	To know the two tier class system. To be able to describe the characteristics of popular and rational recreation for the upper and lower class To understand how the two tier system impacted on sporting recreation.	Introduce what society looked like during pre-industrial times. 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 etc Pupils 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.	Characteristics and impact on sporting recreation (Rural, local, two-tier class system. Limited to mob football and real tennis. Characteristics of popular and rational recreation linked to the two- tier class system (Upper and lower).	Compare to current class divisions and differences across sporting activities.	Sample Assessment Material – AS Paper Question 20, 21

Specifically students should understand the impact of the following social factors on the development of football, tennis and athletics.

3.1.3.1.2 Industrial and post-industrial (1780–1900)

	Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
1	To understand how the industrial revolution, urbanisation, transport and communication and the factory system impacted	Introduce the industrial revolution and the changes that occurred to society as a result. Look at impact son activities played generally.	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).	Pupils investigate which football teams originated as factory teams.	

	society and sport.	Compare society pre-industrial to industrial.	Industrial Revolution. Urbanisation. Transport and communication. Provision through factories. Three-tier class system (emphasis on middle class and working class).		
2	To understand how the British Empire and the church impacted society and sport. To be able to explain the three tier class system.	Recap industrial revolution influence from last lesson. Introduce the three tier system that emerged towards the latter half of the nineteenth century. Investigate impact of church and British empire and also look at how sporting activities might have started to spread alongside improvements in transport etc Pupils create a poster to recognise the importance of the development of NGBs due to society developments.	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. Development of national governing bodies.	Pupils investigate which football teams originated as church teams. Research the key facts of the FA, British Tennis and British Athletics.	Sample Assessment Material – AS Paper Question 22 Sample Assessment Material – A Level Paper 1 Question 19
3	To know the characteristics of association football, lawn tennis and rationalisation of track and field events.	Watch clips of both mob football and real tennis. Compare to clips of Association football and Lawn Tennis in 1900. Draw out the characteristics of sport.	Characteristics of sport.		Sample Assessment Material – A Level Paper 1 Question 16
4	To understand the term amateurism, amateur and professional. To be able to compare the gentleman amateur and the working class professional.	Positive impact of professionalism on sport development. Features of early twentieth century amateurs.	The status of amateur and professional performers.	Research sports today. Which are amateur and which are professional? Debate surrounding issues.	Sample Assessment Material – A Level Paper 1 Question 15

	Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
1	To understand the interrelationship between commercialisation media and sports and governing bodies.	Media (radio, TV, satellite, internet and social media).	Characteristics and impact on sport (limited to development of association football, tennis and athletics). Golden triangle – the interrelationship between commercialisation (including sponsorship), media (radio, TV, satellite, internet and social media) and sports and governing bodies.	Discuss how sport has changed as a result of commercialisation in both a positive and negative way.	
2	To understand the interrelationship between commercialisation media and sports and governing bodies.	Sponsorship - Suitable sponsors for sport. Benefits to the sport, sponsor and to the athlete.	Characteristics and impact on sport (limited to development of association football, tennis and athletics). Golden triangle – the interrelationship between commercialisation (including sponsorship), media (radio, TV, satellite, internet and social media) and sports and governing bodies.	Consider the number and suitability of sponsors promoted in a football or tennis match.	
3	To know the key features of modern day amateurism and professionalism.	Look at case studies from football, tennis and athletics for amateur and professional athletes in these sports.	Characteristics and impact on sport (limited to development of association football, tennis and athletics). The changing status of amateur and professional performers.	Possible of use of the development of Salford FC as a case study.	
4	To know the factors affecting the emergence	Research salary changes in female sport. Compare to male figures.	Characteristics and impact on sport	Factors affecting female professionals	

	of elite female performers in football, tennis and athletics.	Should they earn the same? Discuss Discuss opportunities to participate together with role models and media coverage. Discrimination laws and other changes in society enabling women to increase their commitment to sport.	(limited to development of association football, tennis and athletics). Factors affecting the emergence of elite female performers in football (players and officials), tennis and athletics in the late 20th and early 21 st century.	in today's sport.	
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3.1.3.2 The impact of sport on society and of society on sport

3.1.3.2.1 Sociological theory applied to equal opportunities

	Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
1	To understand the key terms society, socialisation and social processes and their impact on equal opportunities in sport.	Socialisation (primary and secondary). social processes (Social control and social change).	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 control and social change, Causes and consequences of inequality, eg schools/sports clubs).	Glossary of terms.	Sample Assessment Material – AS Paper Question 19 Sample Assessment Material – A Level Paper 1 Question 14, 17
2	To understand the key terms social issues and social structure/stratification and their impact on equal	Show images of different social groupings, eg school friends, OAPs, running groups and families . Describe leisure activities such	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:	Glossary of terms.	

	opportunities in sport.	groups would take part in and why? The ways in which society groups itself for the purpose of daily activity. Identify which are primary and which are secondary and why?	 social issues social structures/stratification socialisation social processes. (Primary and secondary, Social control and social change, Causes and consequences of inequality, eg schools/sports clubs). 	Explain why both primary and secondary influences are vital for healthy development.	
3	To investigation Social Action Theory in relation to physical activity and sport.	Introduce Social Action Theory Discuss how social issues are or have been reflected in sport? Can sport change society for the better?	Understanding social action theory in relation to social issues in physical activity and sport. (Interactionist approach, impact of sport on society and of society on sport).	Discuss that sport reflects society.	
4	To understand the terms equal opportunities, discrimination, stereotyping and prejudice. To know the barriers to participation for the disabled in sport and physical activity and possible solutions to overcome them.	Use of media articles and figures to show prejudice and discrimination to target groups. Practical – playing a disability sport and consider all implications for both the sport and the individual. Discussion point – should sport be segregated or inclusive? (local sports centres may have facilities and equipment, eg wheelchair basketball).	Understanding the terms equal opportunities, discrimination, stereotyping and prejudice. The barriers to participation in sport and physical activity and possible solutions to overcome them for under-represented groups in sport (Disability).	Research the factors you would have to consider to set up a disability sports club at school.	Sample Assessment Material – AS Paper Question 24 Physical activity data /graphs for those with a disability.
5	To know the barriers to participation for ethnic groups in sport and physical activity and possible solutions to	Analyse ethnic participation in elite sports – compare sports. Discussion: reasons, causes, ways	The barriers to participation in sport and physical activity and possible solutions to overcome them for under-represented groups in sport (Ethnic group).	Examples of channelling, stereotyping and stacking in sport.	Sample Assessment Material – A Level Paper 1 Question 18 Physical activity data /graphs for ethnic

	overcome them.	to overcome these. Link to cultural differences and stereotypes.			groups.
6	To know the barriers to participation for women in sport and physical activity and possible solutions to overcome them.	 Possible group research tasks focussed on barriers: 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? 	The barriers to participation in sport and physical activity and possible solutions to overcome them for under-represented groups in sport (Gender).	Analyse the change in women's participation levels in sport.	Physical activity data /graphs for men and women.
7	To know the barriers to participation for the disadvantaged in sport and physical activity and possible solutions to overcome them.	Ask pupils how much they spend on playing their sport. Compare to how much you spend on your sport (give pupils examples) What other barriers do people have in disadvantaged areas?	The barriers to participation in sport and physical activity and possible solutions to overcome them for under-represented groups in sport (Disadvantaged).	Scenario: New facility manager in deprived area – How would you increase participation at your centre?	Physical activity data /graphs for disadvantaged.
		Show profile of deprived areas in relation to health, crime and sport/activity – discuss the impact of increasing participation on these areas.			
8	Identify the benefits of raising participation to both society and the individual.	Match benefit to the area helped. Research Sport England's role in increasing participation in your local area.	Benefits of raising participation. (Health benefits, Fitness benefits, Social benefits). The interrelationship between Sport England, local and national partners to increase participation at grass roots level and underrepresented groups in sport.	Produce a flyer to raise the importance of participation in activity.	Sample Assessment Material – A Level Paper 1 Question 19

3.1.7.1 The role of technology in physical activity and sport

	Learning objective	Learning activity	Specification content	Differentiation and extension	Resources
1 2 3 4	To know what is meant by the key terms quantitative and qualitative, objective and subjective, validity and reliability.	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. Pupils conduct a project to research the use of video and analysis programmes, testing and recording equipment (metabolic cart for indirect calorimetry), use of GPS and motion tracking software and hardware.	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).	Watch a live sports event and record where technology is used and why.	Key words match up