Subject: BTEC Level 3 National Extended Certificate in Sport

Link Teacher/s: JEV/AWI

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| Welcome | *Welcome to the course, overview from the teacher* |
| Course Summary / Expectations | *Summary of course content, assessment methods etc.*  BTEC Sport (Edexcel):  Single BTEC = 4 units = equivalent to 1 A Level  Double BTEC = 9 units = equivalent to 2 A Levels  Triple BTEC = 14 units = equivalent to 3 A Level   |  |  |  |  | | --- | --- | --- | --- | | Qualification size | Number of units | Units | Equivalent to: | | Single | 4 | Unit 1 – Anatomy & Physiology (written exam)  Unit 2 – Fitness Training and Programming for Health, Sport and Well-being (written exam)  + 2 additional units (both coursework) | 1 A Level | | Double | 9 | Unit 1 – Anatomy & Physiology (written exam)  Unit 2 – Fitness Training and Programming for Health, Sport and Well-being (written exam)  Unit 3 - Professional Development in the Sports Industry  Unit 4 – Sports Leadership  Unit 22 - Investigating Business in Sport and the Active Leisure Industry (written exam)  Unit 23 – Skill Acquisition  + 3 additional units (coursework) | 2 A Levels | | Triple | 14 | Unit 1 – Anatomy & Physiology (written exam)  Unit 2 – Fitness Training and Programming for Health, Sport and Well-being (written exam)  Unit 3 - Professional Development in the Sports Industry  Unit 4 – Sports Leadership  Unit 7 - Practical Sports Performance  Unit 8 - Coaching for Performance  Unit 9 - Research Methods in Sport  Unit 19 - Development and Provision of Sport and Physical Activity (written exam)  Unit 22 - Investigating Business in Sport and the Active Leisure Industry (written exam)  Unit 23 – Skill Acquisition  + 4 additional units (coursework) | 3 A Levels |   *.* |
| Tasks to Complete | *Research / Written Tasks/ Glossary completion. This should be reviewed from last year and can be extended to account for y11 starting this work earlier*  *The work will also need to be able to be submitted online/ via email*  **Task:**  You need to research as much as you can about it and create a presentation on each of the body systems below you can choose 2 sections from each system to present. However this must be to a high standard expected on this course. Students must be ready to present back to the class when we return in September.  Below is the specification for each of the topics so make sure that for the topic you are given and the correct course you include all the information in your presentation.   1. **BTEC – Skeletal system**   A The effects of exercise and sports performance on the skeletal system  A1 Structure of skeletal system  Understand how the bones of the skeleton are used in sporting techniques and actions.  • Major bones to include cranium, clavicle, ribs, sternum, scapula, humerus, radius, ulna,  carpals, metacarpals, phalanges, pelvis, vertebral column (cervical, thoracic, lumbar,  sacrum, coccyx), femur, patella, tibia, fibula, tarsals, metatarsals.  • Type of bone – long, short, flat, sesamoid, irregular.  • Areas of the skeleton to include axial skeleton, appendicular skeleton, spine, curves of the  spine, neutral spine alignment, postural deviations (kyphosis, scoliosis).  • Process of bone growth – osteoblasts, osteoclasts, epiphyseal plate.  A2 Function of skeletal system  Understand how the functions of the skeleton and bone types are used in sporting actions  and exercise.  • Functions of the skeleton when performing sporting techniques and actions:  o supporting framework  o protection  o attachment for skeletal muscle  o source of blood cell production  o store of minerals  o leverage  o weight bearing  o reduce friction across a joint.  • Main functions of different bone types when performing sporting techniques and actions:  o long bones – provides leverage, red blood cell production  o short bones – weight bearing  o flat bones – protection  o sesamoid bones – reduce friction across a joint.   1. **BTEC – Muscular system**   B The effects of exercise and sports performance on the muscular system  B1 Characteristics and functions of different types of muscles  Understand different types of muscles and their use in sport.  • Cardiac – non-fatiguing, involuntary.  • Skeletal – fatiguing, voluntary.  • Smooth – involuntary, slow contraction.  B2 Major skeletal muscles of the muscular system  Major skeletal muscles and their combined use in a range of sporting actions.  • Deltoids, biceps, triceps, wrist flexors, wrist extensors, supinators and pronators,  pectorals, abdominals, obliques, quadriceps, hip flexors, tibialis anterior, erector spinae,  trapezius, latissimus dorsi, gluteals, hamstrings, gastrocnemius, soleus.  B3 Antagonistic muscle pairs  Movement of muscles in antagonistic pairs and their use in a variety of sporting actions.  • Agonist.  • Antagonist.  • Synergist.  • Fixator.  B4 Types of skeletal muscle contraction  Understand skeletal muscle contraction in different sporting actions.  • Isometric.  • Concentric.  • Eccentric.   1. **BTEC – Resipiratory system**   C The effects of exercise and sports performance on the respiratory system  C1 Structure of the respiratory system  • Structure of the respiratory system (nasal cavity, epiglottis, pharynx, larynx, trachea,  bronchus, bronchioles, lungs, alveoli, diaphragm, thoracic cavity).  • Intercostal muscles (external and internal).  C2 Function  Understand the function of the respiratory system in response to exercise and sports performance.  • Mechanisms of breathing (inspiration and expiration) at rest and during exercise.  • Gaseous exchange.  C3 Lung volumes  Understand the lung volumes and the changes that occur in response to exercise and  sports performance.  • Tidal volume.  • Vital capacity.  • Residual volume.  • Total lung volume.  • Minute ventilation (VE).   1. **BTEC – Cardiovascular system**   D The effects of sport and exercise performance on the cardiovascular system  D1 Structure of the cardiovascular system  • Structure of the cardiovascular system – atria, ventricles, bicuspid valve, tricuspid valve,  semi-lunar valves, septum, major blood vessels (aorta, vena cava, pulmonary artery,  pulmonary vein), coronary arteries.  • Structure of blood vessels – arteries, arterioles, veins, venuoles, capillaries.  • Composition of blood – red blood cells, plasma, white blood cells, platelets.  D2 Function of the cardiovascular system  Understand the function of the cardiovascular system in response to exercise and  sports performance.  • Delivery of oxygen and nutrients.  • Removal of waste products – carbon dioxide and lactate.  • Thermoregulation – vasoconstriction, vasodilation of blood vessels.  • Fight infection.  • Clot blood.  D3 Nervous control of the cardiac cycle  Understand the control of the cardiac cycle and how it changes during exercise and  sports performance.  • Sinoatrial node (SAN).  • Atrioventricular node (AVN).  • Bundle of His.  • Purkinje fibres.  • Effect of the sympathetic and parasympathetic nervous system. |
| Summer Reading | *Texts, articles etc. Will need to be able to post on Teams/ access online*  PE Books:  BTEC Nationals Sport Student Book 1 + Activebook and BTEC Nationals Sport Student Book 2 + Activebook  Publisher: Pearson  Author: Adam Gledhill,Richard Taylor,Louise Sutton,Matthew Fleet,Chris Manley,Alex Sergison,Chris Lydon  Revise BTEC National Sport Units 1 and 2 Revision Guide  Publisher: Pearson  Author: Sue Hartigan,Kelly Sharp  Revise BTEC National Sport (Units 19 and 22) Revision Guide  Publisher: Pearson  Author: Sonia Lal,Layla Hall,Chris Manley  · Sports rule books and coaching guides  · Sports Biographies/Autobiographies  PE Review (e-magazine)  Journals:   * Journal of Sports Sciences * Journal of Sport & Social Issues * American College of Sport Medicine’s Health and Fitness * Journal British Journal of Sports Medicine * Exercise and Sport Sciences Reviews * International Journal of Sports Science and Coaching * Medicine and Science in Sports and Exercise * Research Quarterly for Exercise and Sport * All sports magazines will offer a view on performing, coaching, science, current issues or history of sport(s). They are therefore valuable wider reading material * National newspapers. The sports pages report global events and the biggest issues |
| Useful Websites/ Resources | *Websites, documentaries, YouTube clips etc.*  TV:   * Sky sports news * Live sport – watch local, national and global events. * Sports biographies and ‘day in the life of’ programmes give an excellent insight into the world of the elite athlete   Websites   * BTEC website:   <https://qualifications.pearson.com/en/qualifications/btec-nationals/sport-2016.html>   * Course materials   <https://qualifications.pearson.com/en/qualifications/btec-nationals/sport-2016.coursematerials.html#filterQuery=category:Pearson-UK:Category%2FSpecification-and-sample-assessments>   * [www.pearsonactivelearn.com](http://www.pearsonactivelearn.com)   User name:  [Sarah.bellis@langleyacademy.org-AL](mailto:Sarah.bellis@langleyacademy.org-AL)  Password:  Langley2016  Websites:   * [www.mypeexam.com](http://www.mypeexam.com) * [www.sportengland.org](http://www.sportengland.org) * <https://www.uksport.gov.uk/> * [www.brianmac.co.uk](http://www.brianmac.co.uk) * NGB websites o e.g. The FA [www.thefa.com](http://www.thefa.com), The RFU [www.rfu.com](http://www.rfu.com) etc. * Twitter * American College of Sports Medicine [www.acsm.org](http://www.acsm.org) * British Association of Sport and Exercise Sciences [www.bases.org.uk](http://www.bases.org.uk) * Coachwise [www.1st4sport.com](http://www.1st4sport.com) * Human Kinetics [www.humankinetics.com](http://www.humankinetics.com) * Sport Science [www.sportsci.org](http://www.sportsci.org) * Sports Coach UK [www.sportscoachuk.org](http://www.sportscoachuk.org) * Top End Sports [www.topendsports.com](http://www.topendsports.com) * Sports and Exercise Testing [www.brianmac.co.uk](http://www.brianmac.co.uk) * Nutrition [www.livestrong.com](http://www.livestrong.com) * BBC Bitesize [www.bbc.co.uk/schools/gcsebitesize/pe](http://www.bbc.co.uk/schools/gcsebitesize/pe)   Live sport  · Active involvement in a sports club or team is essential.  · Go to live sports fixtures and events – This is fun and may help your grades! |
| Key Terms/ Glossary | *Can be completed or can be part of the tasks – for students to research and complete* |