**BTEC Assignment Brief**

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| **Qualification** | Pearson BTEC First in Sport |
| **Component number and title**  | Unit 3: Applying the Principles of PersonalTraining |
| **Learning aim**  | B: Know about the musculoskeletal system and cardiorespiratory system and the effects on the body during fitness training |
| **Assignment title** | **The Body Systems and How They Respond to Fitness Training** |
| **Assessor** |  |
| **Issue date** |  |
| **Hand in deadline** |  |
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| **Vocational Scenario or Context** | You have been asked to review the planned activities in your personal fitness plan to ensure that they are the right activities to support your personal goal for fitness.The co-ordinator of the ‘Get Fit’ initiative would also like you to produce some materials for their clients by reviewing the short-term effects on the musculoskeletal and cardiorespiratory systems during fitness training programmes. |
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| **Task 1 – Part A** | **Structure and function** You are going to create a booklet/series of leaflets to give out to the clients who take part in the ‘Get Fit’ initiative. The promotional material will highlight the structures and functions of the musculoskeletal and cardiorespiratory systems. Your promotional materials should contain: * A labelled diagram that locates the major muscles (deltoid, biceps, triceps, pectoralis major, latissimus dorsi, external obliques, gluteus maximus, quadriceps, hamstrings, gastrocnemius and tibialis anterior).
* A labelled diagram that locates the major bones (cranium, clavicle, scapula, ribs, sternum, humerus, radius, ulna, pelvis, femur, patella, tibia, fibula)
* Diagrams of the synovial joints at the hip, shoulder, knee and elbow. The diagrams should identify the bones in the joint and describe the movements the joint allows.
* The clients need to know how the muscular system works during exercise to create movement. Provide them with a description of the function of the musculoskeletal system.
* A diagram of the cardiovascular system that includes the atria, ventricles, aorta, vena cava, pulmonary artery, pulmonary vein.
* A diagram of the respiratory system which includes the lungs, bronchi, bronchioles, alveoli and diaphragm.
* A description of how the cardiorespiratory system delivers oxygen to the muscles and removes waste products.
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| **Checklist of evidence required**  | * Booklet/leaflets that identify the location/function of the structures in the musculoskeletal and cardiovascular system
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| **Task 1 Part B**  | **Short-term responses to exercise**The co-ordinator of the ‘Get Fit’ initiative would like you to investigate the short-term effects of exercise so that users of the sports centre gain an understanding of what is happening to their body when they exercise. You have been asked to produce a poster describing the short-term responses of exercise which is to be displayed in the sports centre. The poster should include;* The effect of a warm up on the range of movement at a joint
* The effect of progressive overload on the muscles and how it can encourage micro tears
* The effect of fitness training on heart rate and breathing rate and why this happens
* The increased build up of lactic acid when the main component of the fitness session is intense.
* A summary discussing why the changes should happen to the systems during fitness training and give reasons as to why it is important that these changes occur.
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| **Checklist of evidence required** | * Poster
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| **Criteria covered by this task:** |
| Criteria reference | To achieve the criteria, you must show that you are able to: |
| **2B.P2** | Describe the structure and function of the musculoskeletal andcardiorespiratory systems |
| **2B.P3** | Summarise the short-term effects on the musculoskeletal and cardiorespiratory systems during the fitness training programme |
| **2B.M2** | Explain the short-term effects on the musculoskeletal and cardiorespiratory systems during the fitness training programme |
| **Sources of information to support you with this Assignment** | **Textbooks**Adams, M., Armstrong. et al. 2012. BTEC First in Sport Student Book, Pearson Education, ISBN 978 1 44690 161 8**Websites**The following website will provide help in identifying the structure and function of the musculoskeletal and cardiorespiratory systems and their short-term responses to exercise;[www.teachpe.com](http://www.teachpe.com) <https://www.bbc.com/education> <https://www.khanacademy.org/science/health-and-medicine/human-anatomy-and-physiology> **Note to assessors****We are committed to ensuring that teachers/tutors and learners have a choice of resources to support their teaching and study.****We would encourage them to use relevant resources for your local area such as local employers, newspapers and council websites.****Resources from various publishers are available to support delivery and training for all Pearson and BTEC qualifications so that learners and teachers/tutors can select those that best suit their needs.****Above are some examples of textbooks and websites. Further useful resources may be found at www.edexcel.com/resources/Pages/default.aspx.** |
| **Other assessment materials attached to this Assignment Brief** | *E.g. worksheets, risk assessments, <Put None if not included>* |

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| **If you have not achieved the Level 2 criteria, your work will be assessed to determine if the following Level 1 criteria have been met.** |
| To achieve the criteria you must show that you are able to: | Unit | Criterion reference |
| Outline the structure and function of the musculoskeletal andCardiorespiratory systems | 3 | 1B.2 |
| Outline some of the short-term effects on the musculoskeletal andCardiorespiratory systems during the fitness training programme | 3 | 1B.3 |

**Notes to the assessor *(to be removed before distribution to learners):***

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| **Approach to teaching and learning to support learners to *‘get it right first time’*** | Pearson expects that before the assignment brief is distributed to learners they should have already:* attempted formative assessment tasks that replicate important elements of the activities to be carried out in this assignment
* received feedback on how they performed including what they did well and how they can further improve including both the quality of their work and the way they went about their work.

It would be most beneficial for learners to explore the individual elements of the assignments task before attempting to put them all together in a mock assessment. This will help learners to do their best first time and reduce the likelihood of learners needing to do a resubmission. |
| **The scenario** | The ‘scenario’ can be adapted to any situation that would allow the learner to carry out research on how user interface meets user interface design principles, how they vary across different uses, devices and purposes. The selection of the user interfaces is critical, the user interfaces should provide sufficient coverage of Learning Aim A, Teaching content and focus on the user interfaces used by individuals and organisations allowing the learner to provide detailed and relevant user interface examples.The assignment provides a realistic vocational context for the learning aim. It would not be good practice to artificially force this assignment into a ‘vocational role’ that is either:1. not realistic to the level of the learner/qualification
2. not directly relevant to the qualification.

In this instance the learner should have full access to pre-defined user interfaces so that they can be full interrogated and provide the learner with the opportunity to access Learning Aim A requirements.  |
| **The task** | The task set is holistic and allows the learner to be assessed against what is a continuum of effectiveness. Therefore, learners should not be asked to complete separate tasks for each criterion.Evidence submitted must be produced by the individual learner, and **not** as a contribution as part of a team. This means the learners must carry out research on different types of user interfaces used by individuals and organisations, analyse the varying needs of the audience and how these affects both the type and design of the interface and how design principles provide both appropriate and effective user interaction with hardware devices.Print screens of the relevant detailed examples should support the analysis carried out by the learner. The planning and initial design of the user interface, using the design principles listed in section A3, will be undertaken in Learning Aim B Assessment. For Learning aim C the learner will Develop and review a user interface.For this assignment, learners must have access to: a range of user interfaces from different applications/devices, e.g. tablets, watches, software applications, websites, apps.Centres are encouraged to adapt the task providing the requirements of the assessments is maintained and are encouraged to use the Assignment Checking Service available to centres if they do so. |
| **Evidence checklist** | For this instance, a report or podcast or presentation with speaker notes would allow the opportunity for the learner to provide an analysis of how two different types of user interface meet the design principles and user needs. Annotated screen prints of the user interfaces reviewed would support the evidencing of this learning aim.It is important that the evidence provided can be independently authenticated by both an Internal Verifier (IV) and a Standards Verifier (SV). It is, therefore, required that there is evidence of the investigation taking place. In this instance, there is no requirement for the learner to submit a Record of Activity, e.g. observation record or witness statement.  |
| **Sources of information to support you with this Assignment** | Sources of information should directly support the learner to complete the assignment. Sources of information are not intended to form additional teaching and learning. Centres should ensure that all teaching and learning has been completed before distributing the assignment to learners.It is advisable that a mixture of theoretical sources and sources directly contextualised to planning, pitching and running an enterprise will give learners the best opportunity to achieve their best. |
| **Other materials** | This Authorised Assignment Brief does not include any materials to support learners.It is expected that learners produce their own evidence.Therefore, the provision of templates **is not** **appropriate** in this instance. |
| **Your assessment decision** | You will notice that the assessment criteria form a ‘continuum of effectiveness’.Therefore, when assessing the learners work rather than assessing the achievement of each criterion separately you should start at the distinction criteria and work backwards to find the point at which the learner meets the targeted criteria. |