



6th form Summer project

BTEC Level 3 Sport

Extended Certificate



Task: Design a *factfile* about a *current* professional sportsperson/athlete of your choice that must include the following information (which you will need to research!):

Career	Training/lifestyle	Anatomy and Physiology
A detailed description about their career – what do they do/give examples of tasks they do day-to-day/what is their salary?	<p>A detailed description of what their diet would include and <i>why</i>. Think:</p> <ul style="list-style-type: none"> - Total calories needed - Macronutrients (carbohydrates, fats, proteins) - Micronutrients (vitamins and minerals) - Ratio of each (which are most important for them and why?) - How does it alter prior/during/after training or competition? - Importance of hydration 	<p>Find a picture of them competing and identify the main joints involved in their movement. (eg hip, knee, ankle).</p> <ul style="list-style-type: none"> - Label what type of synovial joint each is (e.g. hinge, ball and socket.....etc) - Label which bones meet to form each joint.
Qualifications needed for this suggested career.	<p>What legal ergogenic aids they may use and why. Research</p> <ul style="list-style-type: none"> - Sports drinks - Carbohydrate loading - Energy gels and bars - Protein drinks 	<p>Label the muscles that create movement at the joints.</p> <p>Which muscles are the agonists for each movement (research what this means).</p>
<p>Skills and qualities needed for this suggested career. Give examples of how they would use/when they would need each of these skills.</p> <p>*see the last page for examples of skills, qualities and characteristics to choose from</p>	<p>How they deal with stress, i.e. what techniques they use - Try researching the following and explaining which ones would be most suited to them and why:</p> <ul style="list-style-type: none"> - Relaxation (breathing techniques and meditation) - Positive self-talk - Goal setting - Improved time management - Assertiveness training, 	<p>What type of athlete are they? Are they predominantly aerobic or anaerobic athlete?</p> <p>Explain what each of these terms mean and how it would affect how they train.</p> <p>Explain what lactic acid is, its effects on the body and how it can impact their performance.</p>

	- Physical exercise.	
Based on the skills they have developed from this career suggest a career they could go in to upon retiring (e.g. a career within sports science, sports coaching, sports development, education, leisure management, sports journalism). Explain why they would be suited to this career (how do the skills/qualities they have transfer?).	<p>What components of fitness they need and why (give specific examples of when they use them).</p> <p>Aerobic endurance Muscular endurance Strength Flexibility Speed Body Composition Agility Balance Coordination Reaction Time Power</p>	<p>What are the effects of training on the muscular system?</p> <p>How does it adapt? Explain using the following terms:</p> <p>Hypertrophy Mitochondria DOMS Micro tears Capillarisation Myoglobin</p>
Compare your own skills and qualities against what is needed for your chosen sportsperson AND career after retiring – give examples of what skills and qualities you do have and how they would help + what skills and qualities you would need to improve upon to succeed further.	<p>What training methods they use– can you find an example/design a week's training plan (how many days a week, what intensity, how long for, what method/type (FITT))?</p> <p>Research and pick from: Continuous training Interval training Fartlek training Resistance (weight) training for strength or endurance (research reps, sets, %1RM (% one rep max), rest time between sets) Core stability training Flexibility training Agility, Balance or Coordination training Speed training Power training (plyometrics)</p>	<p>Explain the terms:</p> <ul style="list-style-type: none"> - Isometric - Isotonic - concentric - eccentric <p>muscle contractions. Can you give any examples for your athlete of each contraction?</p>
Explain specific ways you could improve upon your skills, qualities and characteristics needed for the career (the chosen career after retirement)	Explain how they could make their training progressively harder over time (give specific examples from your weekly plan).	<p>Explain what will happen to the athlete's cardiovascular system with long term training (look up and use the below information):</p> <ul style="list-style-type: none"> - Cardiac hypertrophy - Increase in resting and exercise stroke volume - Decrease in resting heart rate

		<ul style="list-style-type: none"> - Capillarisation of skeletal muscle and alveoli - Reduction in resting blood pressure - Decreased heart rate recovery time - Increase in blood volume
	<p>Set them a SMART goal for next season/competition. Make it:</p> <ul style="list-style-type: none"> - Specific - Measurable (e.g. a time/distance/number) - Achievable - Realistic - Time-bound (e.g. in 2 weeks/5 months/next season/next Olympics) 	<p>Look up and explain the following respiratory terms:</p> <ul style="list-style-type: none"> - Tidal volume - Vital capacity - Residual volume - Total lung capacity - Pulmonary ventilation (VE) <p>What will happen to tidal volume during your athlete exercising?</p> <p>What will happen to the athlete's vital capacity with regular training?</p>

*Some example skills, qualities and characteristics you could choose from (give specific examples of when they are needed in the career):

Skills could include

- Rapport building
- Confidence
- Vocal, good communication
- Authoritative
- Provide good feedback
- Motivator, goal setter
- Collaborator
- Uses strategies and tactics well
- Engaging
- Fearless
- Forgiving
- Patient
- Organised,
- Good listener
- Good demonstrator

Qualities could include

- Knowledge of sports skills
- Knowledge of rules and laws
- Understanding the mental needs of participants
- Understanding the physical needs of participants
- Good communication
- High confidence
- Positive
- Empathy

Characteristics could include

- Committed
- Patient
- Driven
- Goal orientated
- Empowering
- Objective
- Persistent
- Forgiving
- Attentive
- Approachable
- Consistent
- Firm
- Fair