



Getting Ahead – Pre-course Work

#ThinkBrock

Sport Science Level 3 Foundation Diploma

Welcome to Sport Science Level 3 Foundation Diploma. In preparation for the start of the course, please complete these tasks and have them with you to hand in during your first week of college in September.

These tasks should take you approximately four and a half hours to complete and are designed to give you an introduction to the subject, and the expectations we have for you to complete at least four and a half hours of independent study, per subject, per week.

Task 1: Specialist Fitness Training

Please see below 6 Components of fitness that are paired up:

- SPEED & AGILITY
- BALANCE & COORDINATION
- FLEXIBILITY & REACTION TIME

Can you link a different sport to each paired component?

Please add what type of training these athletes will apply to improve these components?

Furthermore, please justify the importance of these components to their respective sport.



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Task 2: Sports Injuries

INTRINSIC AND EXTRINSIC FACTORS

Intrinsic risk factors that can cause injury are;

- **Muscular factors** such as muscle imbalances leading to dominant and non-dominant limbs. The weaker muscle is more prone to injury such as a weak left hamstring so other leg must work harder to compensate. Other example of this muscle tightness so will have reduced mobility and might over stretch causing injury.

- **Lack of flexibility** – limited mobility from muscle tightness, muscle thickness due to repetitive load, this can affect muscles, tendon and joints and will cause injury due to over working and stretching.

- **Individual variables** – such as age, fitness level, growth and development, gender, size, body composition, previous injury history will affect this. An older athlete has weaker bones, muscles and decreased mobility so have an increased chance of strains, falling. Younger athletes have an increased risk of apophysis injury such as stress to growth plates from overuse. Having previous injury will increase risk as it could become re injured if proper healing didn't occur and can cause further injury.

- **Postural defects** – can also increase risk of injury such as having lordosis (curved lower back), kyphosis (curved upper back) and scoliosis (s-c shaped curve) these can restrict performance, overuse or not enough recovery can cause strain on posture and worsen existing postural defect. When you're older the intervertebral discs get thinner and will increase risk of injury.

I would like you to:

Identify how you would prevent these factors from occurring as an athlete or a coach.



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Extrinsic risk factors that will cause injuries are;

(Pick 3)

· **Training errors** – excessive volume, excessive intensity along with limited recovery will cause fatigue and injury. If there is a sudden increase in volume, intensity, weight then injury is likely to occur, this is because the muscles will be put under a high impact and strain causing injury. Also having poor technique can put high strain on the wrong muscles, joint and bones and will cause injury putting them under a high load.

· **Coaching** – having poor coaching/communication can cause injury as athlete won't understand what they need to do and how it should be done and could lead them to have poor technique when doing so. A coach should adhere to rules and governing bodies to ensure safety of athletes. A coach can also influence athletes by their style of play as if they teach them to not follow the rules then in matches, they may do something to hurt someone and hurt themselves causing them to become injured.



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· **Environmental factors** – weather conditions, e.g., hot and cold, humid, wet; surfaces, e.g., hard can have an increased risk of injury as athletes are more likely to slip, fall and having hard surfaces will then increase the severity such as slipping on icy fall onto a hard court. Weather conditions will cause surfaces to become more slippery so risk assessment should occur.

· **Inadequate nutrition and hydration-** having bad nutrition and hydration will decrease athlete energy levels causing them to become fatigued quicker, this will also decrease recovery which if not done properly can cause muscle tightness and pain. Taking part in sport when dehydrated can also cause other health issues such as heat stroke, severe dehydration etc. which can be detrimental.

I would like you to:

Identify how you would prevent these factors from occurring as an athlete or a coach.



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Task 3: Coaching for performance and fitness

List 5 Skills a coach should have – can you also give examples of how this Skill would work in the sport of your choice:

List 5 Qualities a coach should have – can you also give examples of how this quality would work in the sport of your choice:

What does DBS stand for and what is it?

What does CPD stand for and what is it and why is this important?

What is Hot and Cold feedback and when would you give this?

**At a club of your choice how many supporting professionals would/could there be?
Can you list them and explain their role and importance.**

List 4 different types of technology that can be used at clubs – You will also need to include the positives and negatives to the technology that you have chosen.