



PROFESSIONAL  
FITNESS  
COACHES  
ASSOCIATION

# LEVEL 3 PERSONAL TRAINING COURSE



**Fitness Testing, Training & Programming**



## Aim and purpose

The aim of this unit is for learners to be able to plan fitness-training sessions and design fitness-training programmes. The aim of this unit is to enable learners to gain an understanding of fitness testing and the importance of health screening and health-monitoring tests.

## Learning outcomes

**On completion of this unit a learner should be able to:**

- Demonstrate an understanding of different methods of fitness training
- Be able to plan a fitness-training session
- Be able to plan a fitness-training programme
- Be able to review a fitness-training programme
- Identify a range of laboratory-based and field-based fitness tests
- Be able to use health-screening techniques
- Be able to administer appropriate fitness tests
- Be able to interpret the results of fitness tests and provide feedback
- Identify crucial elements and skills-sets of an athlete
- Define, describe & explain components of fitness
- Explain components of fitness linked to specific sport requirements
- Identify, describe and explain training methods linked to components of fitness
- Identify training activities linked to developing components of fitness
- Define, describe and explain principles of training linked to specific fitness goals and training needs
- Correctly apply FITT ( Frequency, Intensity, Time, Type) principle to a variety of training needs
- Construct a training programme that is linked to specific training needs, goals clearly developing components of fitness incorporating training principles and FITT principle





- Collect specific information to help construct a periodised training programme
- Correctly apply 'periodisation' (microcycle; mesocycle; macrocycle) when putting together a training programme
- Define, describe & explain components of periodised training programme
- Describe, explain and correctly apply SMART (Specific, Measurable, Achievable, Relevant, Time-based) goals – short, medium & long term
- Describe and explain means of monitoring training progress & attaining feedback
- Identify, describe and explain a series of fitness tests
- Describe the correct protocol for testing

**Assessment Brief IQA by:**

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**Date: 9.3.2021**

**Assessment Brief sampled by Lead IQA:**

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**Date: 9.3.2021**

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**Date:**

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**Date:**



## Ingredients for a Super Athlete

What would go into your super athlete?

*Please tell us what you think....*



## Activity 1 - All-Round Fitness

*Before we start to plan a fitness-training programme we need to understand the different components of fitness we need to be focusing on.*

*The 6 components of fitness we are going to be looking at are:*

- Flexibility
- Strength
- Muscular endurance
- Power
- Aerobic endurance
- Speed





Let's try and put a definition in place for each one...

<b>Flexibility</b>	
<b>Strength</b>	
<b>Muscular endurance</b>	
<b>Power</b>	
<b>Aerobic endurance</b>	
<b>Speed</b>	

Have a look at the following sports performers and give reasons why they need the component of fitness identified

Why does **Mo Farah** need **aerobics endurance**?



Why does **Amir Khan** need **muscular endurance**?





Why does **Goldie Sayers** need **speed**?



Why does **Beth Tweddle** need **flexibility**?



Why does **Danny Cipriani** need **strength**?



Why does **Katherine Grainger** need **power**?





## Activity 2 - Bending the rules!

### Flexibility Training

We are going to look at:

- Static stretching
- Active stretching
- Passive stretching
- Ballistic stretching
- Proprioceptive Neuromuscular Facilitation (PNF) stretching



Match one of the following types of stretches to the correct definition:

<b>A</b>	<b>Static</b> stretching	<b>B</b>	<b>Passive</b> stretching	<b>C</b>	<b>PNF</b> stretching	<b>D</b>	<b>Active</b> stretching	<b>E</b>	<b>Ballistic</b> stretching
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DEFINITION	ANSWER (A, B, C, D or E)
Gradually easing into a stretch position and holding it there	<input type="checkbox"/>
A stretch where you assume a position and hold it with some other part of your body or with the assistance of a partner	<input type="checkbox"/>
Assuming a position and then holding it there with no assistance other than using the strength of antagonist muscle	<input type="checkbox"/>
A more advanced form of flexibility training that involves both the stretching and contraction of the muscle group being targeted	<input type="checkbox"/>
Using the momentum of a moving body or a limb in an attempt to force it beyond its normal range of motion	<input type="checkbox"/>



What other methods of training can improve flexibility?

## Activity 3 – You’ve got the Power... with some strength thrown in!

Having looked at flexibility training methods we are now going to look at methods for two other components of fitness – strength & power.

### **Strength & Power Training**

Specifically, we are going to look at:

- Resistance machines
- Free weights
- Plyometrics
- Anaerobic hill sprints

Do any of the methods above mean anything to you... or have you ever used any of them?

On the following page please jot down any ideas you may have before we look at them in some detail.



Jot down your ideas in the box below:

OK, now let's have a look at them in a bit more detail...

## Resistance Machines

Machines which require the user to apply a force against an opposing force generated by some form of resistance.

Exercises are isotonic if a body part is moving against the force.

Exercises are isometric if a body part is holding still against the force.



**Key points** to note...



## Free Weights

Weight training is a common type of strength training for developing the strength and size of skeletal muscles. It uses the force of gravity (in the form of weighted bars, dumbbells or weight stacks) to oppose the force generated by muscle through concentric or eccentric contraction



**Key points** to note...

## Plyometrics

Plyometrics is designed to produce fast, powerful movements and improve the functions of the nervous system..... used to increase the speed or force of muscular contractions, which in turn provides explosiveness for a variety of sport-specific activities

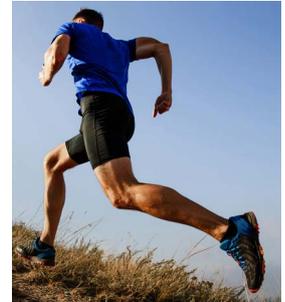


**Key points** to note...



## Anaerobic hill sprints

A short hill is one which takes no more than 30 seconds to run up and has an inclination between 5 and 15 degrees gradient. The athlete's energy source on short hills is entirely anaerobic. They help develop, amongst other things power, muscle elasticity and strength endurance



**Key points** to note...

## Flipped Learning task

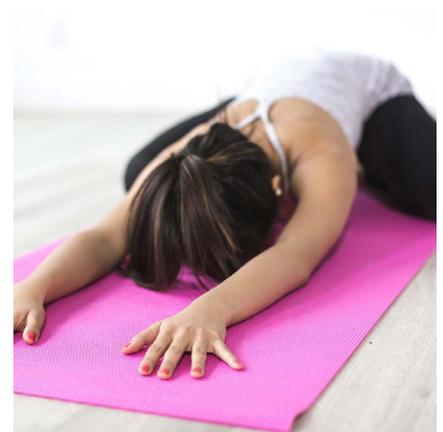
Flexibility for all.

Being flexible (something we have covered in Unit 1) is really important for many sports.

What sports therefore do you think require flexibility most of all?

List 5 please;

1	
2	
3	
4	
5	





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## Activity 4 - Out of the Blocks

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### Basic Sprints

Set 2 cones out 10-20 metres apart. Sprint from one cone to the next and slowly jog back to the start. Vary the start of the sprint to make the drill more sport specific. For example face backwards, lie down, jump up, pretend to receive a pass, jump to head a ball etc.

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### Down Hill Sprints (Over-speed training)

Down-hill speed and agility drills help to develop leg speed and co-ordination. This is sometimes referred to as over-speed training. Keep the distance short (10-15 metres) and make sure the hill is only slight. An alternative method of over-speed training is to use elastic cords. An Over-Speed Trainer consists of a pulley system to provide a smooth build-up of speed. It enables the sprinter to move at a rate greater than 100% of their usual top speed. It can also be used to provide resistance much like uphill sprints.

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### Hollow Sprints

Set 5 cones out in 30 metres intervals. Sprint 30 metres, jog 30 metres, sprint 30 metres and jog 30 metres to the final cone. Walk back to the start and repeat.

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### Cruise and Sprint

Mark out a distance of 100 metres. From the start gradually accelerate to reach full speed at about 60 metres. Sprint all out for the final 40 metres. Reduce the number of repetitions for this exercise as it takes longer to complete.

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### Ladder Drills

A ladder is a simple training device that helps to improve co-ordination and leg speed. It can be used for a number of speed and agility drills and is particularly useful for sports such as tennis and basketball that requires fast and coordinated footwork.

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### The Snake

Set up a series of 6-8 cones in a straight line about 1 metre apart. Weave through the cones, turn and weave through back to the start.

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### Follow the Leader

A training partner and large area is required for this drill. Have your training partner jog, run and sprint randomly over a large area. You must try to shadow them as closely as possible. This is an excellent drill that helps to develop reaction time, acceleration and speed endurance.



Use this space to note down any speed-fitness training methods that are relevant to your own sport:

Name of sport:
Training methods:



## Activity 5 - Developing Muscular Endurance

Last, but not least, we are going to look at a few training methods that can be used to develop muscular endurance, in particular:

- Circuit training
- Core-stability training
- Medicine-ball training

Key features shown on the next page...



The key features of each are:

### **CIRCUIT TRAINING**

### **CORE-STABILITY TRAINING**

### **MEDICINE-BALL TRAINING**



## 'How & Why' to Administering Training

It's all well and good knowing about the various fitness training methods, such as what they are, how to set them up, how to administer them etc. but it's also important to know why they are suitable for each of the components of fitness we have looked at.

Read the example below for circuit training, then give three descriptions of other training methods.

So, the question is...

### ***'Why is circuit training used to develop muscular endurance?'***

...Here is an **example** answer to help you:

Circuit training is used because it can effectively develop both strength and cardiovascular fitness in the same exercise session.

As circuits consist of a series of exercises or stations completed in succession with minimal rest in between, they allow flexibility and can add variety to training programmes. A well-designed circuit can therefore provide a balanced workout that can be targeted at all (or a selection of) muscle groups and can build both muscular and cardiovascular endurance.

Circuit routines can also be designed to correct any muscle imbalance and is an ideal training method for all levels of performer because it can be tailored to meet their ability and fitness levels.

They are also effective because they are relatively easy to set up, can incorporate elements of technique development if required and are fun to take part in.

They fulfill many of the principles of training, such as:

- Individual differences
- Specificity
- Variety
- Overload
- Adaptation

*Example*



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**TRAINING METHOD 1**

**TRAINING METHOD 2**

**TRAINING METHOD 3**



## Activity 6 - How FITT are you?

During your lessons you will cover training sessions that cover the following:

- Cardiovascular training
- Resistance training
- Flexibility training
- Speed training

Before we do though, you need a good understanding of the FITT principle – so have you any idea of what FITT stands for ?

Have a look at the definitions of F. I. T. T. on the next page, and then see if you can apply those definitions to your own exercise regime over the last few days. Write them in the boxes provided.

### *FITT principle*

<i>F</i>	
<i>I</i>	
<i>T</i>	
<i>T</i>	



## Aim and purpose

Then use the FITT principle to develop your physical activity plan:

**Frequency:** How often?

**Intensity:** What percentage of your target heart rate do you exercise?  
(This is not necessary when beginning on exercise program).

**Type:** What mode of exercise are you using  
(walk, swim, aerobics, bike, dance, weights, yoga, Pilates, etc)?

**Time:** How long can you exercise a day?  
(This does not have to be all in one session. Time can be broken up over the day).

The following website <http://www.sport-fitness-advisor.com/fitt-principle.html> has some sound information & advice on how the FITT principles can be applied to cardiovascular and resistance training... so why not check it out and make some brief notes below:

FITT principle	Type of training	
	CARDIOVASCULAR	RESISTANCE



# Cardiovascular Training

When looking at cardiovascular training there are many aspects we need to consider, so today we are going to run a cardiovascular training session and talk through some of the more important points you need to be aware of.

## 1. Exercise intensity – what is this all about?

Let's discuss what is meant by exercise intensity...

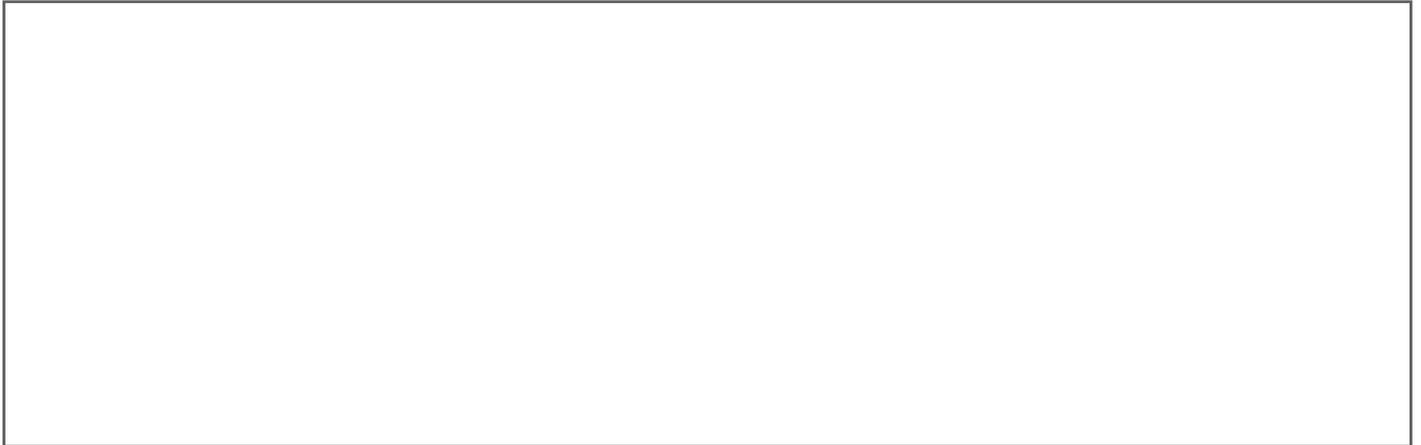
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## 2. Monitoring intensity – how do we do that?

• <b>Observation:</b>
• <b>Talk test:</b>
• <b>Rate of perceived exertion:</b>
• <b>Maximum heart rate:</b>
• <b>Karvonen formula:</b>



### 3. Anaerobic threshold



### 4. Work/rest ratios – let's get this right!



Ok, you know the basics... but there is nothing to stop you finding out more!

## Building up a Resistance

Having spent some time on cardiovascular work we are now turning our attention to resistance training... covering such areas as:

### Resistance training:

- Choice of exercises
- Number of exercises
- Order of exercises
- Resistance
- Repetitions
- Sets
- Rest between sets
- Speed of movement
- Symptoms of training.





During your taught sessions you will go through the fundamentals and components for effective strength sessions. Look at the questions below and give answers for when constructing an effective strength session.



What type of exercises can we use?

What level of resistance is needed?

How many repetitions do we need to do?

What sort of rest period is needed between sets?



How many exercises should we be doing?

In what order should we do them?

How many sets are needed?

What systems of training can we use?

What speed of movement should we be looking at?



Let's have a look at the systems of training we can use in more depth!

Here is some detail:

### **Single-Set System**

This is one of the oldest training methods. The single-set system is the execution of one set of each exercise. Each set usually consists of 8-12 reps at a controlled tempo. This is most often used for individuals who workout twice a week. Although multiple-set training is perceived as being more beneficial for strength and size gains in advanced exercise enthusiasts, the single-set system has been shown to be as beneficial for a beginner.

### **Multiple-Set System**

The multiple-set system consists of performing a multiple number of sets for each exercise. This form of training can be appropriate for both novice and advanced athletes, but has been shown to be superior to the single-set system for the advanced exerciser.

### **The Pyramid System**

This system involves a progressive or regressive step approach that either increases or decreases weight with each set. In the light to heavy system, an individual performs 10-12 reps with a light load and increases the resistance for each following set, until the individual can perform one to two reps, usually in four to six sets. This system can be used for workouts that involve only two to four sets or higher-rep schemes, like 12-20 reps. The heavy to light system works in the opposite direction. The individual starts with a heavy load and for one to two reps then decreases the amount of weight and increases the reps for four to six sets.

### **The Superset System**

This type of training utilizes a couple of exercises performed in rapid succession of one another. It can be combined with compound set and tri-set systems. Compound sets involve the performance of two exercises for antagonistic (opposite) muscles (chest/back combos). Working opposite muscle groups allows for better recovery and is more time efficient. Tri-set systems use three (or two) exercises for the same muscle group or body part (chest press, cable press, and push-up). Typically, supersetting involves sets of 8-12 reps with no rest between sets or exercises. This is beneficial for muscle gain and muscular endurance.



### **The Circuit Training System**

This is a system consisting of a series of exercises that an individual performs one after the other, with minimal rest. Circuit training is a great training system for those with limited time or those who need to increase their Target Heart Rate to burn more calories.

### **The Peripheral Heart Action System**

This is a variation of circuit training that alternates upper-body and lower-body exercises throughout the circuit. This system is very beneficial for incorporating an integrated, multidimensional program to alter body composition.

### **The Split Routine System**

A split routine involves breaking up muscle groups to be trained on separate days. Many body builders and sports athletes use the split routine system. It helps to bring about muscle size (hypertrophy) and more work can be performed for the allotted time per workout.



## Planning for Success

We now have all the tools required to plan a training session for the 4 different areas we have looked at;

- Cardiovascular
- Resistance
- Speed
- Flexibility

Remember, we need to include the FITT principles, so a cardiovascular training session plan could look something like:



<b>Session for:</b>	<b>Albert Tomlinson</b>
<b>Age:</b>	<b>40</b>
<b>Level of fitness:</b>	<b>Low – limited physical activity for 20 years +</b>
<b>Session number:</b>	<b>Week 2 – session 1</b>
<b>Target heart rate:</b>	<b>Between 90 – 120bpm (50 - 70% of max. heart beat)</b>
<b>Session duration:</b>	<b>1 hour 20 minutes</b>



The key features of each are:

Activity	Duration	Heart rate
Warm-up: series of gentle activities and stretching to gradually raise heart rate & prepare body for activity	15 minutes	Resting heart rate increasing towards target of 90-126bpm
Continuous walking on treadmill – using incline and speed function to raise heart beat to necessary level	25 minutes	90-126bpm
Rest and rehydration	5 minutes	Heart rate decreases
Continuous cycling	25 minutes	90-126bpm
Cool down: series of gentle activities and stretching to return the body to original starting point	10 minutes	Return body gently to resting heart rate

A session like this would form part of a more comprehensive training programme – but gives you an idea of how the FITT principles can apply to a cardiovascular training session.

Can you identify where the FITT principles are covered above?

Use the rest of the lesson today to plan your own training sessions. As we will be trying selected ones out on the rest of the group you should base them on the current levels of fitness within the group! Try and include as much details as possible... added depth will certainly help if you are questioned on the content later on!

If you cover the following content you won't go far wrong!



**Resistance training:** Choice of exercises / Number of exercises / Order of exercises / Resistance / Repetitions / Sets / Rest between sets / Speed of movement / Symptoms of training

**Key points to consider:**



**Flexibility training:** Choice of exercises /  
Number of exercises / Order of exercises / Repetitions / Time

**Key points to consider:**

**Speed training:** Time/Distance / Repetitions / Sets /  
Rest between sets / Work/rest ratio

**Key points to consider:**

## Planning for the Bigger Picture

We are now going to look at producing a 6-week training programme for someone of your choice. Before we do, there are certain elements we need to take into consideration.

- Collecting information from the person in order for us to plan an individualised training programme that meets their needs.
- Implementing the 'principles of training' & 'periodisation' within the programme.
- Incorporating elements of review into the programme – so we can monitor progress and provide constructive feedback.





What are your initial thoughts about the above & how we may approach each one?  
The key features of each are:

### COLLECTING INFORMATION



### PRINCIPLES OF TRAINING & PERIODISATION



### MONITOR & REVIEW





# Principles of Training

One of the key aspects you need to consider when designing a training programme are the principles of training.

We are going to discuss the principles during the session today and then implement them during some physical activity sessions over the next few weeks.



Individual differences...

Specificity...

Progression...



Overload...

Reversibility...

Variation...

### **FLIPP TASK**

We have already looked at FITT (which is also part of the principles of training) in previous activities. If you want more information on the principles the following links may be useful:

<http://www.successcycling.co.uk/principles-of-training/>



Feedback from Flip task:

Here are some scenarios to further test your understanding of the application of principles of training;

## Request 1 - Nicky

Dear Fitness Guru

I am training for the local 10k run in 6 weeks but do not seem to be getting any fitter. I go for a 5k run every Tuesday and Thursday and do some weight training on my upper body at the gym every Saturday.

Help me please.....time is running out!



## Request 2 - Samantha

Dear Fitness Guru

I have just started playing netball again after being injured for 8 weeks with a torn hamstring. I am really behind the pace.....I was puffing and panting after 2 minutes last night! I can't understand it – I have been swimming twice a week to get my levels of fitness up but it doesn't seem to be working.

I need your advice and I need it quick!

## Request 3 - Sue

Dear Fitness Guru

Me and 2 of my mates are trying to lose some weight and tone up our bodies – ready for our summer holiday in Ibiza

We have all been given the same programme to follow at our local gym but although it seems to be working for my mates the effects on me are NIL!

Why is this... help me please!



## Request 4 - Mitch

I want to get stronger but the weight training I am doing seems to be having no effect. I have been doing the same programme in the Fitness Suite for about 6 weeks now but cannot see any real improvement.

Why are my muscles not growing... am I not training properly?

## Request 5 - Matilda

Dear Fitness Guru

I have started playing ladies football and really enjoy it. However, my coach says I need to improve my upper body strength and has given me a fitness-training programme to follow. At first I started to lift slightly heavier weights (but it made no difference) so I increased the weight a lot and am really struggling – I ache all the time!!

I can't seem to get it right... why is this?



# Cycles of Training

A further ingredient you need to include when putting a training programme together is 'periodisation' or different cycles of training. They are commonly referred to as:

- Microcycle
- Mesocycle
- Macrocycle

The information below has been taken from the website

<http://www.pponline.co.uk/encyc/0147.htm>, with a few changes made to it to make it a little more reader friendly!

Once you have read it, try and give some examples of each over the page, in any sport you like. An example for each cycle is given for you (in athletics).

## Microcycle

...a 'microcycle' is simply a number of training sessions which form a recurrent unit. For example, if your training consists of a hard day, an easy day, and then a rest day, followed by the hard-easy-rest pattern again, these three days represent your basic training unit, or microcycle. Or, if you're a runner and your typical training week consists of a hill workout, an interval session on the track, a long run, three easy runs, and a rest day, that repetitive weekly pattern is your microcycle. Typically, a microcycle lasts for five to 10 days (for many athletes, a microcycle is simply one week of training in a predictable way)

## Mesocycle

...in contrast, a 'mesocycle' is a block of training, consisting of some number of microcycles, which emphasises the attainment of a particular goal. A mesocycle usually covers four to 12 weeks

## Macrocycle

.....a 'macrocycle' is a long stretch of training which is intended to accomplish an extremely important overall goal, such as the preparation for and completion of a very important marathon. A macrocycle is made up of a number of different microcycles and covers a period of many months. A macrocycle lasts for 10 to 12 months.

Example of **microcycle**

**Athletics – an athlete's weekly training programme**

Your examples....



Example of a **mesocycle**

Your examples....

**Athletics – an athlete’s training programme in the lead up to the Regional Championships**

Example of a **macrocycle**

Your examples....

**Athletics – an athlete’s training programme in the lead up to the annual National Championship**

## More than just a trainer

Top sports performers often have a whole range of staff to help them train effectively and compete to win. This support staff can include:

- Coach
- Physiotherapist
- Sport Psychologist
- Nutritionist
- Fitness Coach



Although all aspects are important, fitness is a key component of success, therefore effective training programmes need to be put in place to ensure the performers have the necessary level of fitness to perform at their best.

A Fitness Coach, as well as having a good knowledge of training methods and the components of physical fitness, will need to understand the principles of training as well as being able to gather important information on the performer before a suitable training programme can be developed.

So, if Andy Murray for example, was to employ a new fitness coach, what sort of questions or information would the coach need to ask or find out?

Jot your ideas down below:



Hopefully, you will have included information relating to Andy Murray's:

- Short (1), medium (2) and long-term (3) goals
- (SMART) targets in tennis (4)
- Lifestyle (5)
- Medical history (6)
- Physical activity history (7)



## Flipped task – Case studies

### Case Study 1 - Billy

Billy is 18 and was full-time trainee at a Championship Football Club. He trained hard every day and had just broken into their reserve team.

During one of these matches he suffered a serious knee-ligament injury which meant he was out of the game for 9 months.

After this period out he struggled to regain his place in the team, lost some of his motivation and was eventually loaned out to a semi-professional Conference team to regain sharpness and fitness. He did reasonably well and eventually signed for them.

He now trains 3 times a week in the evenings and works part time in a leisure centre the other 2. He plays each Saturday and goes out with his mates for a few beers every Saturday night.

He is slowly regaining fitness and form and would like to get back into professional football – probably with a full-time Conference team initially and then with a League club, but needs to shift the few extra kilos he has put on recently if this is to be achieved and regain that lightning speed he used to have before his injury.





## Case Study 2 - Lisa

Lisa is 22. When at school she was always a little overweight but really enjoyed sport... although she never excelled at any in particular, often using her asthma as an excuse! Since leaving school she has done no sport at all but has got married and has a 3 year old son.

She is now working full-time at a large bank (as a trainee manager) where 2 of her colleagues are fitness fanatics – both train 3 times a week with their local Triathlon Club.

They convinced Lisa to go training with them and it soon became evident that she has the potential to be a good triathlete.

She has not yet competed in a triathlon as such but has successfully completed a 3k run. A team triathlon is 6 weeks away and the club want her to be part of their B team in this event – which she is pleased about.

Deep down, she feels as though she should be in the A team and intends to prove this at the event! She has also started to think of entering the Regional Triathlon next year and eventually an Ironman competition.... but before then she needs to improve her swimming (as it is the weakest part for her) and she regularly is over 3 minutes behind the rest of her team mates in training.



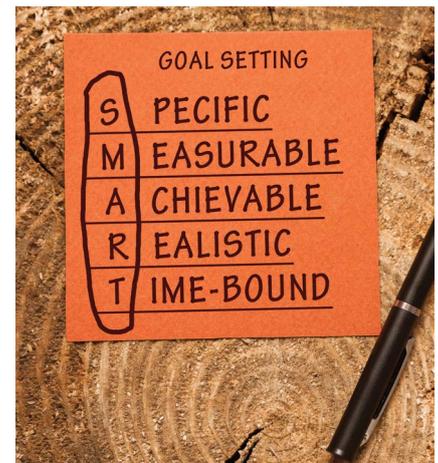


## Setting SMART Targets

The chances of the person sticking to their training programme and achieving their aims will be greater if you can agree and share some goals with them.

These goals (or aims) can be split into 3 types – short, medium and long term and need to be SMART.

- Short-term, for example up to 1 month
- Medium-term, for example up to 6 months
- Long-term, for example 6 months and beyond
- Targets also need to be SMART, or in other words:



<b>S</b>	SPECIFIC	<i>...not lose weight but lose 2kg in 2 weeks</i>
<b>M</b>	MEASURABLE	<i>...we can measure 2kg</i>
<b>A</b>	ACHIEVABLE	<i>...is 2kg achievable in 2 weeks? Probably!</i>
<b>R</b>	REALISTIC	<i>...is it realistic? If they are going on holiday then probably not!</i>
<b>T</b>	TIME-BOUND	<i>...2 weeks – that's time-bound</i>

The examples above look at someone who wants to lose weight... but you can apply them to all sort of targets! Have a look at the following targets and identify what is wrong with them.

The following are not all linked to fitness training – but should give you a better understanding of SMART target setting:

Mary wants to get fitter in time for the annual 10k run in 3 months' time?

**What's wrong with this goal?**



Delia wants to get back to size 10 jeans by her holiday in 6 weeks.  
She was a size 10 (5 years ago) but is now a 14.

**What's wrong with this goal?**

Roberto wants to sort out his diet. He works away for weeks on end –  
staying in bed-and-breakfast accommodation his company arrange for him

**What's wrong with this goal?**

Gregory plays 4th team squash and wants to progress to the 3rd team by the  
start of the winter league in 6 months. Since working part-time he has plenty  
of time to train and manages to play matches at least 3 times per week

**What's wrong with this goal?**

Glendon has smoked for 30 years and is desperate to pack up... and has set  
himself a target of doing so in 1 week? He smokes 25 cigarettes a day!

**What's wrong with this goal?**



## Monitoring Progress

The next important step to building a programme is to identify and apply an appropriate mechanism to monitor (or measure) progress.

What are you going to monitor though?

You have to think about this carefully because you want the person who is taking part in the programme to take it seriously. Monitoring & review has to be done truthfully & regularly to be of use.

What needs to be monitored then? Get your initial ideas down below?



As well as thinking about what needs to be included, you also need to think about how the information is going to be recorded.



Get your ideas down below.....we can look at the pros & cons of each one!

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<b>Feedback required on:</b>	<b>Because...</b>
<b>PROGRESS</b>	
<b>ATTITUDE (how do they feel)</b>	
<b>MOTIVATION</b>	
<b>ISSUES AFFECTING TRAINING</b>	
<b>CHANGE TO GOALS</b>	
<b>ANY OTHER?</b>	



## Attaining Feedback

We need to get monitoring right, so let's go through some of the essential things that you need to get some feedback on.

For each of the areas of feedback (below) write down why you think each are important.

## Example of a Training Diary

### Training Diary and monitoring

<b>Date of session</b>	Monday 23 March
<b>Session details</b>	<ul style="list-style-type: none"><li>• 2 hour aerobic session</li><li>• (session programme attached)</li></ul>
<b>Progression</b>	Started session with bleep test. Got to level 12, which is 2 levels further than previous test 2 weeks ago. No other test results for this session
<b>Attitude</b>	I was feeling pretty good going into the session as I competed in an event on Saturday and recorded a personal best for a 5k run. I think this gave me a real lift and helped me achieve a great bleep-test result
<b>Motivation</b>	My motivation levels have been low recently due to some poor performances and lots of pressures away from training (exams and part-time work). My performance at the weekend really helped and the test results today have given me a real lift
<b>Issues affecting training</b>	Exams & part-time work
<b>Change to goals</b>	All goals remain the same although as I have set myself a target of Level 13 on the bleep test I think this may need to be reviewed as I think I can achieve at least Level 15 now!
<b>Instructor feedback</b>	You have got back on track after a few dodgy weeks! I know you have been studying hard for exams but you need to manage your work commitments more effectively as they are impacting on your studies and training programme.

Please discuss them with me before they become an issue in future – we can then work out an alternative interim programme.

Well done today though – and well done with your PB over the weekend.....a reward for all your hard work over the past few weeks!

We will review your training programme at the end of this week, especially in light of your possible change in goals.



---

## Assignment Support – Why just pass when you can excel

---

Consider criteria command task for Merit & Distinction when reading through the following examples;

If feedback is given correctly, it can have a very positive impact on the person and lead to improvements and a desire to carry on training.



Any feedback you give should:

**Describe** the strengths that have emerged from the programme

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**Describe** the areas for improvements that are evident from the programme

---

**Explain** the strengths & areas for improvement, giving reasons why they are a strength or need improving

---

**Evaluate** progress made –

giving your opinion on the importance and the value of various aspects of the programme

---

**Make some recommendations** as to future activities

---



Have a look at the example over the page. It provides the basis for some constructive feedback to the person who has completed the 6 week training programme (regarding the flexibility and speed elements of the programme).

### STRENGTHS:

<b>What went well with the programme?:</b> <ul style="list-style-type: none"><li>• You completed all 6 weeks of the programme &amp; followed the flexibility exercises well</li><li>• Your sit &amp; reach results improved by xxx</li><li>• Your shoulder flexibility test results improved by approximately xxx</li><li>• Both sets of results exceeded targets set</li></ul>	<b>Support your comments:</b> <p>Your commitment to the programme was excellent, attending every session and giving maximum effort at all times.</p> <p>You understood the importance of flexibility in your sport (pole vault) and focused on additional trunk, hamstring and shoulder-stretching exercises during the cool down phase of the sessions.</p> <p>Your test results at the end of the programme support improvements made.</p>
<b>Why might this have been the case?:</b> <p>We discussed in detail why your flexibility needed to improve and the exercise we agreed to use in the programme matched your short-term goals.</p> <p>We focused on your trunk &amp; shoulders as your coach had identified them as areas for improvement.</p> <p>The flexibility section of your training programme was seen as the most important area and I think your focus and effort reflected this.</p>	

### AREAS FOR IMPROVEMENT:

<b>What didn't go so well with the programme?:</b> <ul style="list-style-type: none"><li>• Your speed results did not improve to the level we hoped – in fact there was no increase in speed.</li><li>• Your motivation levels decreased as a result of limited progress.</li></ul>	<b>Support your comments:</b> <p>Although you started well with the speed exercises the results didn't seem to match the effort you were putting in.</p> <p>Your desire to improve your speed (over 20m) was there – so it is disappointing that progress was limited.</p>
<b>Why might this have been the case?:</b> <p>We didn't really set any tangible (SMART) targets so it was difficult to measure improvements. When we realised this (Week 3) the targets we then set were in hindsight unrealistic and therefore non-achievement resulted in de-motivation.</p> <p>The speed section of your training was scheduled after the cardio activity; therefore you were often tired before starting the speed element. Poor scheduling (on my behalf) contributed to this.</p> <p>No initial testing of speed was done – again a mistake.</p>	



**EVALUATION & RECOMMENDATIONS:**

<b>Evaluation of progress</b>	<b>What recommendations would you make to improve future activities</b>
<p>Your progress (flexibility) has been good, the results regarding speed improvements not so though.</p> <p>The improvements in shoulder flexibility in particular have contributed to a significant improvement in your vaulting technique (as reported by your coach) and should result in increased success in the future. Increased trunk flexibility as well will help with your vaulting and improve your ability to extend at the end of your vault.</p> <p>Your coach reported that these two areas were impacting on your ability to vault to a height you had the potential to achieve – so this is encouraging.</p> <p>Shoulder and trunk flexibility play an important role in your discipline and therefore you should continue to focus on the exercises we included in your training programme.</p> <p>The speed section was less successful. If you are to improve further your basic speed on your approach needs to improve – to give you the necessary momentum to achieve greater height when vaulting.</p> <p>Although your speed is fine, we need to set some very specific targets and place more emphasis on this component of fitness. Although we knew it was important it didn't have the same importance as flexibility and therefore impacted on the results.</p> <p>Improved scheduling, target setting, initial assessment and greater thought on the type of exercises should help.</p>	<p><b><u>Flexibility</u></b></p> <ul style="list-style-type: none"> <li>• <b>Similar approach, although a greater emphasis placed on wrist, trunk and neck flexibility exercises</b></li> <li>• <b>Separate flexibility sessions to be scheduled – although focus on flexibility will still be a key component of cool-down section of all sessions</b></li> <li>• <b>Targets to be reviewed every 3 months and included in mesocycle &amp; macrocycle plans</b></li> <li>• <b>Athlete to observe flexibility sessions at regional development centre to gain new ideas</b></li> </ul> <p><b><u>Speed</u></b></p> <ul style="list-style-type: none"> <li>• <b>SMART targets need to be set and baseline data recorded</b></li> <li>• <b>Separate speed sessions need to be scheduled</b></li> <li>• <b>Focus more on agility-based exercises, progressing onto power-based when agility is improved</b></li> <li>• <b>Agility ladders &amp; agility hurdles would be ideal here</b></li> <li>• <b>An increased focus on plyometrics – although this should only be done at club sessions where expertise exists amongst the coaching staff</b></li> <li>• <b>Regular reviews need to take place – initially on a monthly basis</b></li> <li>• <b>Athlete to observe flexibility sessions at regional development centre to gain new ideas</b></li> </ul>



# Fitness Testing

## Physical readiness questionnaire

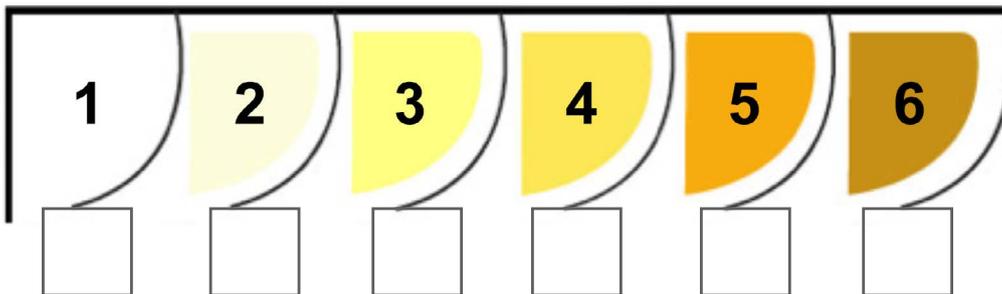
What time did you go to sleep?

What time did you wake up?  Total hours:

What colour was your urine first thing this morning?

*Please put an 'X' in the box below the colour you feel is most applicable:*

### URINE CHART



Did you wake up hungry?

On the scale below please indicate how sore or stiff you felt first thing this morning *by putting an 'X' in the box:*



Did you have breakfast this morning within 1 hour of waking up? (Please put an 'X'): YES  NO

How much fluid have you consumed this morning?  
(Coffee, tea and sugary drinks do not count):

Are you hungry? YES  NO  Do you feel sufficiently alert? YES  NO



Are you suffering from any physical discomfort that you believe would impede a physical performance test result?

**You already know it all!**

---

What lab & field-based fitness tests are you aware of?

How should the tests be run & managed?



What about health screening? Any ideas regarding the type of tests carried out?

## Subjective assessment "How fit are you?"

To make the exercise more valid, you will need to give reasons to support your statements!!

Component of Fitness	Current level	Reason(s)
<b>Aerobic endurance</b>	1) High <small>Type number:</small> 2) Average <input type="checkbox"/> 3) Low	
<b>Muscular endurance</b>	1) High <small>Type number:</small> 2) Average <input type="checkbox"/> 3) Low	
<b>Flexibility</b>	1) High <small>Type number:</small> 2) Average <input type="checkbox"/> 3) Low	
<b>Speed</b>	1) High <small>Type number:</small> 2) Average <input type="checkbox"/> 3) Low	
<b>Strength</b>	1) High <small>Type number:</small> 2) Average <input type="checkbox"/> 3) Low	
<b>Power</b>	1) High <small>Type number:</small> 2) Average <input type="checkbox"/> 3) Low	
<b>Body composition</b>	1) High <small>Type number:</small> 2) Average <input type="checkbox"/> 3) Low	



# Components of Fitness and how we test them

Identify one test per component of fitness:

Test No.	Fitness Test	Component of Fitness Tested
1		
2		
3		
4		
5		
6		
7		

For each test you need to:

## Describe it in as much detail as possible, including such things as:

- The objective of the test – what does it intend to measure
- The resources required to conduct the test – what equipment and additional information is needed
- How to conduct the test – people, time, skills etc.
- How to assess the performer – what level or stage are they at
- How to analyse the results – how can improvements be measured
- Who the test is targeted at – age, sport etc.
- How reliable is the test – what might affect the results
- How valid is the test – is it recognised as a good measure of fitness



## Describe the advantages and disadvantages of each test, to include:

- The cost – high/low
- The time taken – short/lengthy
- The equipment – a little/a lot
- The facility required – large/small
- The skill of the person carrying out the test – do they need training/experience
- Any other good or bad points you can think of





Name of test:

Component of fitness tested:

## DESCRIPTION

<b>OBJECTIVE</b>	
<b>RESOURCES NEEDED</b>	
<b>HOW CONDUCTED</b>	
<b>METHOD OF ASSESSMENT</b>	
<b>HOW ANALYSED</b>	
<b>TARGET GROUP</b>	
<b>RELIABILITY OF TEST</b>	
<b>VALIDITY OF TEST</b>	



Name of test:

Component of fitness tested:

### ADVANTAGES/DISADVANTAGES

	ADVANTAGES	DISADVANTAGES
<b>COST</b>		
<b>TIME</b>		
<b>EQUIPMENT</b>		
<b>FACILITY</b>		
<b>LEVEL OF SKILL REQUIRED BY THE PERSON CONDUCTING TEST</b>		
<b>ANY OTHER?</b>		



An example is given for you for the SKINFOLD CALIPER TEST (for cost) – used to measure body composition. Have a practice expanding on your own research on the following page... choosing any of the 7 tests you looked at.

	ADVANTAGES	DISADVANTAGES	EXPLANATION
<b>COST</b>	The equipment needed is relatively cheap – calipers can be purchased for between £15 - £25. There are more expensive versions which come with body assessment software (approx £200 - £250).	The calipers will need calibrating from time to time. The cost of calibration equipment can be expensive – although some companies offer a calibration service for approximately £50	<i>The relatively cheap purchase price is an advantage because set-up costs are low – therefore this will encourage body composition to be included in fitness testing.</i>  <i>More expensive calibration equipment however is a disadvantage because there will always be the temptation to not have the calipers calibrated on a regular basis. This could result in inaccurate readings and therefore invalid test results.</i>

## Pros / Cons

*Remember* – there will not always be advantages AND disadvantages...there may just be one of them. However, make sure you look into both possibilities – just in case!

## Essential Information

When designing your health-screening questionnaire it is important to collect sufficient and accurate information to help you to confidently assess the current health of the person in question.

Collecting this information is usually conducted via a lifestyle questionnaire, similar to one you may have completed if you are the member of a gym or health club.

So, for this activity you are required to view a few examples of existing lifestyle questionnaires and start to design your own, ensuring that you can collect information on the person, such as their:

- Level of physical activity
- Alcohol consumption
- Smoking habits
- Stress levels
- Diet
- Medical conditions
- Previous illnesses etc.

**YOU NEED A BALANCE –  
MAKE SURE YOUR HEALTH SCREENING  
QUESTIONNAIRE IS APPROPRIATE**

You may want to include other aspects; these are just a few examples.



Once you have a few ideas about what to include, you also need to think about how you will conduct your questionnaire. This isn't as straightforward as just getting your questions down on paper as you need to take into account:



- How long the questionnaire will take to complete – people will not want to complete it if it is too lengthy
- Will it include an opportunity for them to expand on their response if necessary
- Will it be purely a paper exercise or will you be able to ask questions to clarify key points
- How will you ensure confidentiality and professionalism... you may be discussing sensitive issues

Some of the above may require you to look at your current skill level in such areas as non-verbal communication and listening skills so...

...once you have a good idea of what you are going to ask and how you are going to conduct the questionnaire you need to get a draft copy together and have a dry run with a friend, classmate or member of your family to see if:

- You are asking the right questions/are you getting the information you need
- You feel comfortable conducting the questionnaire
- You have the skills to conduct it professionally and to gather the necessary information if it is not forthcoming initially

Your task therefore is to:

- Look at existing questionnaires
- Design your own
- Conduct it with a friend/colleague etc.
- Look at areas for improvement
- Note down where you (or the questionnaire) needs to improve in the future

## Areas for improvement



The questionnaire could be conducted in a variety of ways, a few of which are listed below. By each one, note down what you think are the advantages & disadvantages of them.

<b>METHOD</b>	<b>ADVANTAGES</b>	<b>DISADVANTAGES</b>
<b>FACE-TO-FACE (IN PERSON)</b>		
<b>OVER THE PHONE</b>		
<b>VIA EMAIL</b>		
<b>VIA POST</b>		
<b>VIA WEBPAGE</b>		

Whichever method you use (and there may be a variety) you need to be prepared to:

- Question them further if you are unsure on any points or need additional information
- Be a good listener and be able to pick up on important issues
- Show positive body language & an interest in what you are doing!

It is also important to bear in mind the following points when conducting a health-screening questionnaire. Note down the important points as we go through them.



### Client Confidentiality



### Informed Consent



### Coronary Heart Disease Risk Factors



### Medical Referral





## Testing, Testing

Once we have completed the initial screening we can move onto the next stage – conducting some health-monitoring tests.

We therefore need to know the correct protocols & procedures for various tests, such as:

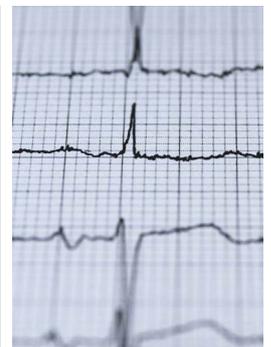
- Heart-rate tests
- Blood-pressure readings
- Lung function
- Waist-to-hip ratio
- Body Mass Index



As we discuss each one, make sure you note down the key points of each one.

When you start to use them on real people it's important you do so safely and in line with agreed procedures.

### Heart rate tests



### Blood pressure readings





### Lung Function



### Waist to hip ratio



### Body Mass Index *...Final bit!*





## Using the Data

The data you receive from your client's health-screening questionnaire and health-monitoring checks will give you the basis from which to:

- Describe the strengths of someone's current health level
- Describe areas for improvement
- Evaluate the results and make suggestions for improvements to their lifestyle

Have a look at the following examples and see if you can answer the questions that follow:

### Client 1 - Randolph

Randolph's questionnaire & health-monitoring checks reveal:

- There is a history of coronary heart disease in his family
- He currently exercises 3 times a week
- He smokes 20 cigarettes a day
- He is a non-drinker
- His BMI reading is normal
- His blood-pressure reading is 125 over 85 – which is slightly high
- Using a peak-flow metre his results are lower than predicted

What are Randolph's strengths?

Where does Randolph need to focus his improvements?

What suggestions can you make to Randolph to improve his lifestyle?



## Client 2 - Felicity

Felicity's questionnaire & health-monitoring checks reveal:

- She is a non-smoker
- Her peak-flow reading was above what was predicted
- She doesn't do any strenuous exercise
- Her blood-pressure reading was normal
- Her BMI reading was 27.9 – which is overweight for her height
- There is no family history of heart disease although there is of Type 2 Diabetes
- She works shifts and has erratic eating times

What are Felicity's strengths?

Where does Felicity need to focus her improvements?

What suggestions can you make to Felicity to improve her lifestyle?



## Commands explained

<b>List / Identify</b>	Name examples of the question. Detail is not needed here – you do not need to expand on the example given.
<b>Describe</b>	Paints a picture about something.
<b>Explain</b>	Should give reasons for things and should include the ‘how’ and ‘why’ of the topic of interest. Generally the word ‘because’ is used.
<b>Evaluate</b>	Look at both the strengths & weaknesses/ pros and cons/ advantages & disadvantages of the question.
<b>Analyse</b>	This is comparing and contrasting. For example when analysing the heart it is sometimes compared to a mechanical pump, but the contrast is that it is biological tissue (muscle) rather than mechanical and metal/ plastic.
<b>List / Identify</b>	<ul style="list-style-type: none"> <li>• Dumbbells</li> <li>• Barbell</li> <li>• Weight plates</li> <li>• Treadmill</li> <li>• Cross trainer</li> </ul>
<b>Describe</b>	The barbell is a straight bar which can be used for a variety of exercises, such as deadlift, squat, bench press. An Olympic barbell weights 20kg and is 7 feet long. It is texturised metal in the middle of the bar. Weight plates are put at either end of the bar and are held in place by safety clips.
<b>Explain</b>	The Olympic barbell is used in gyms because it is a standardised size which will fit any standard weight plates and allow people to train in the same way regardless of the gym facility used. The texturised metal in the middle of the bar aids grip because it stops the bar slipping. Safety clips are very important when using a barbell with weight plates because if they are not used the plates can fall off the bar, causing injury.
<b>Evaluate</b>	<b>Pros:</b> Olympic bars are good pieces of equipment to use as they are standardised pieces of equipment. A variety of exercises can be performed using a barbell such as the deadlift, the squat and the bench press. <b>Cons:</b> Olympic bars can be too heavy for smaller framed people. They can be dangerous for inexperienced users if technique is poor. Also, the texturised grip can cause damage to the skin on hands.
<b>Analyse</b>	The barbell is an important piece of equipment in the development of core stabilisation, muscular strength and muscular power. It can help build strength and power in the legs during the squat and deadlift (comparing). It differs from dumbbells (contrasting) as with the barbell both hands are connected by the bar but dumbbells are independent of each other, sometimes making exercises harder.



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## Additional Notes

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This section is for you to use for any further notes you would like to make or to complete any of your answers if you found that you ran out of space during the completion of this document:



PROFESSIONAL  
FITNESS  
COACHES  
ASSOCIATION





## Assessment Feedback

Tutor Name:

Student Name:

First submission date:

### Feedback:

Tutor signed:

Date:

Resubmission...

Resubmission date:

### Feedback:

Tutor signed:

Date:



Assessor - Please put an 'X' in the relevant box.

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