Personal Exercise Program (PEP)

Overview:

The purpose is to assess students' skills in analysing and evaluating performance through a personal exercise program (PEP) in order to improve performance in a chosen activity.

Content:

- The PEP will cover a six to eight-week period.
- The PEP can relate to any physical activity of your choice from the activities list given in Component 3.
- You need to make links between learning from Components 1 and 2.
- Some relevant sections include 1.1-1.4, 3.1-3.6 (Component 1) and 1.1-1.3 (Component 2).
- You must record all training sessions plus any other relevant data.
- Maximum 1500 words in total (PARQ, graphs, charts, tables, diagrams, flow charts, and training record forms do not count towards the word count).



PEP Checklist

- 1) Physical Activity Readiness Questionnaire (PARQ)
- 2) Your Sporting Profile
- 3) Identification of component of fitness to improve, justification of choice in relation to impact on your performance.
- 4) Pre-PEP Fitness Test Results
- 5) Analysis of your pre-PEP fitness test results to determine and justify your choice of training methods and training intensities.
- 6) Select and justify the use of appropriate principles of training, and SMART targets, to set your goals in your PEP.
- 7) Training log of all your training sessions plus any other relevant data across a six to eight-week period.
- 8) Evaluation of your PEP

PART 1: PARQ

- The Physical Activity Readiness Questionnaire (PARQ) is a simple self-screening tool that can and should be used by anyone who is planning to start an exercise program.
- You must include a completed (centre-devised/sourced) PARQ.
- You can look on the internet for good examples of PARQ's and base yours on one of those.

EXAMPLE A

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 1. Has your doctor ever said that you have a heart condition and that you should only do physical activity recommended by a doctor? 2. Do you feel pain in your chest when you do physical activity? 3. In the past month, have you had chest pain when you were not doing physical activity? 4. Do you lose your balance because of dizziness or do you 	Yes	No	
 3. In the past month, have you had chest pain when you were not doing physical activity? 4. Do you lose your balance because of dizziness or do you 			
doing physical activity? 4. Do you lose your balance because of dizziness or do you			2. Do you feel pain in your chest when you do physical activity?
ever lose consciousness?			4. Do you lose your balance because of dizziness or do you ever lose consciousness?
5. Do you have a bone or joint problem (for example, back knee or hip) that could be made worse by a change in your physical activity?			
6. Is your doctor currently prescribing drugs (for example, water pills) for your blood pressure or heart condition?			
7. Do you know of any other reason why you should not do physical activity?			

PART 2: Your Sporting Profile

- Introduction about you, including name and age.
- Explanation about sporting activities that you enjoy.
- Where you have represented school or club.
- Identification of your main sport now (the one you're going to do your PEP on).
- Detail about the position you play, who you play for etc.
- What your training regime consists of, how often do you train a week pitch/gym etc.
- What components are important for your sport EG: The health related components that are important for rugby are cardiovascular endurance because you have to keep running for 80 minutes. The skill related components that are important are agility so that you can dodge a defender to break the line.

EXAMPLE A

For my PEP I will use netball as my sport. I train once a week in school and play at least one game per week for my school team.

The important components of fitness in netball are your cardiovascular endurance because matches last 1 hour, in 4 quarters of 15 minutes. Flexibility is also important in my sport, as you need to be able to stretch when marking your opponent, so you need to be flexible in your arms and legs. Another important element is muscular strength in both, your legs and arms in order to keep passes strong and to be able to jump during interceptions. Finally muscular endurance is also important in your legs and arms to be able to keep running and delivering strong passes throughout the game.

Elements of skill that are needed in netball are agility, speed, power, good reaction times, balance and coordination. Agility is needed to be able to move around opposing players and dodge to get free from your marker and find space, speed is used to reach the ball first during centre passes and interceptions. Power is used to jump high in rebounds, interceptions or when receiving the ball and to move off the line in order to reach the ball quicker than you opponent. Good reaction times are needed during rebounds and centre passes to reach the ball before the opposing team. Balance in my sport is used when marking an opponent, however this element is more important to a goal keeper or defence so doesn't apply to my position as much. Finally I need coordination to be able to do different things at the same time, such as being able to catch and turn in the air at speed and fluently.

PART 3: Identification of Component of Fitness

- Your strengths in your fitness and why that helps you in a game situation.
- Your weaknesses in your fitness and why that hinders you in a game situation.
- Identification of the component of fitness you want to improve with a suitable justification in relation to the impact on your performance.
- The component of fitness should be selected from:
- Cardiovascular fitness (aerobic endurance)
- Strength
- Muscular endurance
- Flexibility
- Body composition
- Agility
- Balance
- Coordination
- Power
- Reaction time
- Speed

EXAMPLE A

My strengths in gymnastics I think are flexibility because I am very supple in my legs and back which helps me a lot in gymnastics. Being flexible is vital for a gymnast as we need to be able to show extension in individuals, tumbles, balances and other movement, we also need flexibility to be able to perform splits, split jumps, bridges, flics and any other acrobatic element which require flexibility. Also, I think strength in my fitness is my muscular strength and power, being quite strong helps a lot being a gymnast because to be able to perform several tumbles in a short period time uses a lot of strength as you need the power to be able to perform the somersaults.

My weaknesses in fitness are: speed and cardiovascular endurance. As a gymnast I don't really think speed is needed so therefore I don't think it affects my performance, but speed is needed in gymnastics especially on floor and vault and this is because on vault you need to pick up a fast short sprint to get the power from the springboard to perform somersaults and twists, and it's the same with the floor, on the floor you need to tumble and be able to do several somersaults to have a good sprint before performing these would give you an advantage in getting the height and power required. Cardiovascular endurance is quite important as well in gymnastics because firstly, a gymnastics competition is run for a whole day and even though you get some rests, 2 of your events could be on straight after each other so you need you heart to recover quickly so you can still perform to the best of your ability.

EXAMPLE B

As well as my muscular strength another personal strength I have is muscular endurance. This is important because you are racing for 40 miles and need muscular endurance in your quadriceps, gluteals, hamstring and gastrocnemius to continue to push the pedals down to keep maintaining your speed. You also need muscular endurance in your arms to keep good control of the bike especially when cornering or on uneven surfaces.

My weaknesses in my performance are my power and acceleration. I am very good when I am at my top speed and I am able to maintain a pace for a long period of time but I sometimes am slow to react and push off when someone makes a break or to reach my top speed prior to a sprint finish. I am also weaker in my core strength and this leads to poor balance which probably explains why I have suffered a couple of nasty falls when going around a tight corner at speed.

My test scores prior to starting my pep:

PART 4: Pre-PEP Fitness Test Results

- A record of fitness levels at the beginning of the PEP, using one recognised fitness tests.
- The list of recognised fitness tests is below:
- Coopers 12 min run
- Cooper 12 min swim test
- Harvard step test
- Grip dynamometer
- 1-minute sit-up test
- 1-minute press-up test
- Vertical jump
- Wall sit, sit and reach.

EXAMPLE A

Note: In the boxes on the left hand side, it may be useful to write which tests these results were for.

Tests	National Average	My score
Cardio-vascular Endurance	Excellent >2100m Good 2000-2099m Average 1600-1999m B. average 1500-1599m Poor <1500m	1550 m
Muscular Endurance (sit ups and press ups)	Excellent >40 Good 35-40 Average 25-34 Fair 15-24 Poor 5-14 Very Poor <5	39 sit ups 12 press ups
Flexibility	Excellent >42cm Good 35-42cm Average 29-34cm B. Average 22-28cm Poor 15-21cm Very Poor <15	35 cm
Power	Excellent >55cm Good 45-54cm Average 35-44cm Fair 25-34cm Poor <25	26 cm
Speed	Excellent <4.5sec Good 4.6-4.5sec Average 4.8-4.7sec Fair 5.0-4.9sec Poor <5.0	5.0 seconds
Agility	Excellent <17.5sec Above average 17.5-18.6sec Average 18.6-22.4sec Below average 22.4-13.4sec Poor >23.4sec	17.6 seconds
Balance	Excellent >30sec Above average 30-23sec Average 22-16sec Below average 15-10sec Poor <10sec	22 seconds
eaction Time	Excellent >42cms Good 37-42cms Average 29-37cms Fair 22-28cms Poor <22cms	29 cms

EXAMPLE B

Test	Testing And Measuring		These would't
	Protocol	Pre-PEP Score	
Filmess	The circult with no sectoring. The circult will be use metres and you count the amount of circults you complete you need so ran as	N/A	N/A.
endurance	Press Ops- The ecolow muss be at 90° and the chest much bouch a double stacked fist. The person is working for 30 seconds secure the stack muss be kept scrought	20 times	21 cimes
	Set upt - The elbows must bouch the top of the theses and the hand must stay on the temples. The period works for 30 seconds whilet another period can had their anylit down.	23 rimes	15 times
Flexibility	set and reach test - legs must be fully extended and kept straight fingers on both hands must be kept on the ruler. Then you have to push the ruler as for as possible the person has three attempts.	+11 cm	+ 12 cm
Power	Standing broad Jump - Feet must be behind the line and it must be a two footed betwo footed and the Landing should be measured from the back foot The pason has three attempts	1.60 m.	1. 70 m
noisanibroa	Acternate Hand wall test. Mand two metres away from the way, using one bay, seet kept against the 2 metre board whilst chrowing the bay right. then catching left and vice versa The person works for 60 seconds	57. eimes	58 bimes
Adulted	Incinois Aguety run-mart out the contes with a 10m height. 5 metre width and 33m gaps between the contes in the centre person begins in the and begins on the whistere.	NIA	NIA

EXAMPLE C

My pre PEP fitness test results.

Cooper run:	3050m
Abdominal Curl test:	35
Sit and reach :	17.5cm
flinois Agility test:	17.12 s
Standing broad jump:	26 cm
Ruler drop test:	9cm
30metre sprint:	5.02s
Standing stork test:	10 seconds

The three methods I have chosen, as I personally need to improve on them are the following:

Cardiovascular fitness, flexibility and co-ordination

For my methods of training that I will undertake in order to improve these areas I have chosen:

Circuit training: as it allows rest because you can do two components with one method. Also it fits in with the available facilities at my school.

Fartlek: it is easily done and the changing pace can represent the change of pace in a match as well as focusing on the component of fitness I have chosen.

PART 5: Analysis of Pre-PEP Results

- You need to analyse your pre-PEP fitness test results to determine and justify your choice of training methods and training intensities.
- You should use appropriate methods of analysis to explain why you have chosen the component of fitness you wish to improve/optimise.

EXAMPLE A

My weaknesses in netball are my cardiovascular endurance, as I often struggle to keep up with the match after a lot of running or when I am coming to the end of the game. This is evident from my pre-PEP fitness test results. I also need to improve my speed so that I can be faster during centre passes and interceptions. In addition, the power in my legs needs to be improved so I can then jump higher and if I improve my power it could help me with my speed and time off the line in a centre pass. To improve these element of fitness I will use SMART principles. Using SMART principles means I will set up a 6 week plan to improve my fitness with goals that are, specific to my sport and weaknesses, measurable, achievable and realistic.

PART 6: Method of Training

- Select and justify one appropriate method of training from the list below or other appropriate recognised methods to use in your PEP:
- Continuous
- Fartlek
- Circuit
- Interval
- Plyometric
- Weight/Resistance
- Select and justify the use of appropriate principles of training, and SMART targets to set your goals in your PEP. The principles of training include:
- Individual needs
- Specificity
- Progressive Overload
- FITT (frequency, intensity, time, type)
- Rest and Recovery
- Reversibility
- Thresholds of training (aerobic target zone, 60-80% MHR, anaerobic target zone 80-90% MHR)

EXAMPLE A – SMART TARGETS

I have created a list of three goals. These are SMART goals as they are specific to what I want to achieve and what I need to achieve in my sport. They are measurable, so I can compare my results before and after the training programme to see clearly if I have improved or not. My goals are realistic as they are achievable but I need to work hard to achieve them. I have also included a set time for my goals to be achieved in, this is to keep me motivated when being pushed to achieve my goals.

- I will improve my cardiovascular endurance in the 12 minute cooper run by 25m over the 6 weeks
- I will improve my core strength and endurance in the 1 minute sit up test by 10 over the 6 weeks
- I will improve my power in the sergeant jump by 10cms over the 6 weeks.

EXAMPLE B – SMART TARGETS

My two goals/targets are -

- 1. My first target is to improve my Cardio-vascular endurance by 100m (2000m), and improving this will take part in the 12 Minute Copper Run. I will achieve my target in the space of 6 weeks where I will be doing continuous training to improve my Cardio-vascular endurance. If I achieve this goal it will improve my performance as a gymnast as I will be able to do my gymnastics routine without getting out of breathe easily because my Cardio-vascular endurance will have improved.
- 2. My second target is to improve my Speed by 0.2 seconds (5.60 seconds), and improving this will take part in the 30m sprint. I am aiming to achieve this target in the space of 6 weeks of interval training to improve my power and speed. If I achieve this goal it will improve my performance as a gymnast as I will get enough speed to give me power to be able to perform the tumbles and individual elements I need to perform.

EXAMPLE C – PRINCIPLES OF TRAINING

Principles of training

I have applied the principles of training to my programme. I have made the programme to my individual needs. An example of this is the continuous training and circuits which have a lot of aerobic activities in as one of my main targets is to improve my cardiovascular endurance and doing these methods of training should help me with this target. I have made the programme specific to my sport, for example, flexibility is important to help prevent injury and increase your stride length this is one of the components that is not as important compared to power, agility, muscular endurance and cardiovascular endurance. Flexibility would be more important for a dancer or gymnast. I have also made sure that I have included rest and recovery so that my muscles can repair and the rest allows the adaptations to my muscles, cardiovascular and respiratory systems to take place.

EXAMPLE D - FITT

FITT

Frequency – I will do my training 2 or 3 times a week in my PE lessons. This will be a definite number of 15 sessions because I only have my PE lessons to do it.

Intensity – The intensity of my exercise will progress on a weekly basis. I will increase the intensity by increasing the wait I am lifting and the number of repetitions I do in my circuit. I will increase the amount of time I train when using the continuous method of training.

Time – Each session is an hour and in these sessions I will always do a pulse raiser warm up and a cool down with stretching. I will increase the time on my continuous run/cycles/row. I will increase the time slightly on my circuit this will cause progressive overload.

Type – I will have three different types of training method. I will use circuits to work on my speed, power and cardiovascular endurance. I will use interval training to improve my speed. I will use

continuous training to improve my cardiovascular endurance. Using a range of methods should stop me getting bored.

EXAMPLE E – PRINCIPLES OF TRAINING

Principles of training

Principles of training=The best training programmes are usually built on the principles of specificity, overload, progression and <u>reverability</u>. You can also use FITT to help remember the key things to consider when making programmes for individual goals.

Progressive overload: A gradual increase in training as you become fitter .It is achieved by using either frequency, intensity, type and time. I will use progressive overload in my exercise plan by gradually increasing the intensity each week.

Individual needs: Training that meets your individual requirements .I am using this by only training the three methods of fitness that I need too personally improve.

Specificity: Matching your training to the need of the support or activity. Specificity is used as I have chosen elements to improve that are specific to football, that will help me improve football and potentially some other sports.

Rest and Recovery: Allows adaptation and for your body to recover. To use this I will insert tests and recovery sessions into my PEP. (Fitness tests on the previous page)

The Smart Principle

The smart principle is a good way of setting reachable and beneficial goals.

Specific: Knowing exactly what the goal is.

Measurable: Know when you have got to your goal.

Achievable: setting achievable objectives/goals.

Realistic: Will you be able to reach this target.

Time bound: Know how long it will take and by when you want to achieve it.

Using the SMART principle, for co-ordination I want to be able to pass a football in a football variated ball to wall. For cardiovascular fitness I want to be able to run 60m at full speed and then recover quickly. For flexibility I want to be able to reach 25cm.

PART 7: Training Log

- You must record all training sessions plus any other relevant data as appropriate, for later analysis and evaluation.
- An example of the type of data to collect when monitoring the heart rate during cardiovascular exercise includes preexercise, working and recovery (at one minute intervals for five minutes).
- Another example of data to collect: When exercising to improve muscular endurance, the number of repetitions should be measured, taking into account the number of repetitions completed without stopping, and decrease in recovery time between sets of repetitions.
- You should adapt your training and your PEP as appropriate, as it progresses, for example increase its intensity and duration. Any adaptions to the PEP should be noted and explained on the training record forms and analysed and evaluated for their impact on performance.

EXAMPLE A

Exercise	Time(mins)	Intensity	Reps
Cross Country	20	60-80% MHR	1
Stretching	10	Low	3x 10seconds hold

Week 1 Session 2

Exercise	Time(mins)	Intensity	Reps
Core Circuit (Plank, wall sit, side plank, crunches, leg raises, press ups)	6	60-80% MHR	3
Stretching	10	Low	3x 10 seconds hold

Week 2 Session 1

Exercise	Time(mins)	Intensity	Reps
Weights – squats, jump squats, lunges, jump lunges	15	80%-90% MHR	8 x 3 reps
Stretching	10	Low	3x 10 seconds hold

EXAMPLE B

Exercise	Time (Minutes)	Intensity	Reps
Continuous - Circuit - Bike	Overall 20 Minutes 19 Minutes 16 Minutes	60% - 80%	
Interval	Overall 22 Minutes	80% - 100%	
Core - Plank - Abdominal crunches	Hold 60 seconds, rest 20, Hold 60 seconds, rest 20,	60% - 80%	3

Week Five

Exercise	Time (Minutes)	Intensity	Reps
Continuous - Circuit - Bike	Overall 20 Minutes 20 Minutes 18 Minutes	60% - 80%	
Interval	Overall 25 Minutes	80% - 100%	
Core - Plank - Abdominal crunches	Hold 70 seconds, rest 20. Hold 70 seconds, rest 20.	60% - 80%	3 3

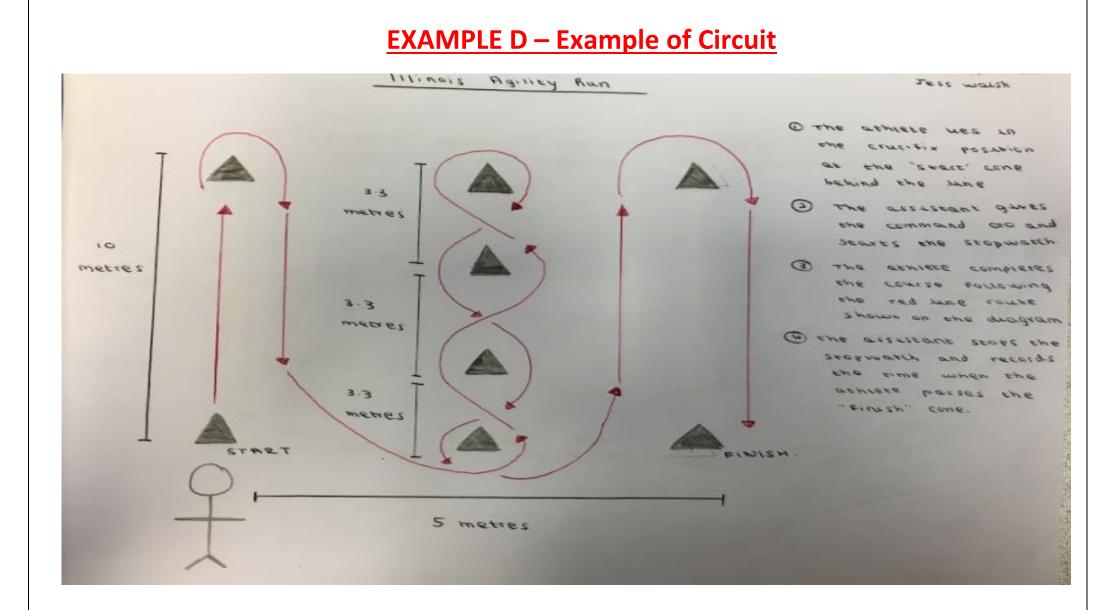
Week Six

Exercise	Time (Minutes)	Intensity	Reps
Continuous - Circuit - Bike	Overall 20 Minutes 20 Minutes 20 Minutes	60% - 80%	
Interval	Overall 25 Minutes	80% - 100%	
Core - Plank - Abdominal crunches	Hold 70 seconds, rest 20. Hold 70 seconds, rest 20.	60% - 80%	4

EXAMPLE C

Day		Stretches Hus
	Activity and timing.	PRYSIA
Nonday 8.09 14	20.00-2145 aym session	1
Tuesday 9.09.14	19.00 - 20.45 Hockey braining at waterield. H 10 Minute FATHESS	×
wednesday 10.09.14	20.00 - 20. 20 Strenght and conditioning sossion	1
Thursday 11-09-14	19.00-20.45 Morkey training at waterseld	×
Ft 2 day	Rest day. Have an new of stretching	1
Saturday 13 09 14	09.30 - 16.30 2nd team tournament a Haufar Hockey curb.	1
Sunday 14.09.14	10.00 - 17.00 JEPC tournament and truan to, North of England (futures cus)	/

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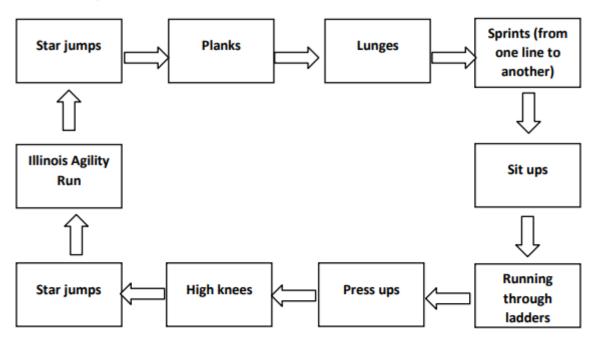
EXAMPLE E

Details of session: Circuit

Warming up is important because it physically and mentally prepares you for the exercise you are about to do. Additionally, it increases the temperature of your muscles, tendons and ligaments. This means you have a reduced chance of injury. Also, it increases flexibility. This may help aid your performance in sports. There should be two things included in a warm up: a pulse raiser and stretching.

Firstly, I will do a pulse raiser to get oxygen around my body quicker. In this warm up, I will do a jog for 30 seconds. Then do high knees for 30 seconds. After this, I will do heel flicks for 30 seconds.

For the stretching - focusing on the muscles in my legs. For example, lunges and opening and closing the gates, holding them for 3 seconds so I don't get injured.



Main activity:

A cool down is important for three reasons: it aids the removal of lactic acid; is aids the removal of carbon dioxide; it slowly brings your heart rate back to normal. There are two stages of a cool down: light exercise and stretching.

I will do a slow jog so I can safely lower my heart slowly. After this, I will do some stretching and hold them for 10 seconds each.

EXAMPLE F

Summary of sessions

- Week 1- Circuit: This was my first day training and as I wasn't very fit, so I found it very hard to complete and I found myself being out of breath multiple times. My resting heart rate is 75bpm and my working heart rate is 102 bpm. My recover rate was 17 minutes.
- Week 1- Interval: As this was my first day doing interval training. I found myself having to walk for a longer time than I planned to try and catch my breath back. My working heart rate didn't change however, my recovery rate slightly changed from 17 minutes to 16 minutes.
- Week 2- Circuit: I don't think like anything improved as I still found myself getting tired quickly and having to slow down occasionally but that only happened around when I was at my 6-7 station. My working heart rate changed a bit to 107 bpm and my recovery time didn't change.
- Week 2- Interval: This was still hard for me as I still was getting out of breath quite easily, however, I do feel like it did slightly improve as I was able to run for a bit longer before I got out of breath. My resting heart rate has decreased by 2 bpm however my working heart rate and recover rate didn't change.
- Week 3- Circuit: Today I felt a bit better as I didn't get that out of breath as quickly. Additionally, I completed the first 8 stations with no problem which I am very proud of. My resting heart rate lowered to 70 bpm, my working heart rate increased to 108 bpm and my recover rate decreased to 15 mins 30 secs.

PART 8: Evaluation of the PEP

- You will be required to analyse the data gathered during your PEP, and evaluate it to show how your performance in your chosen activity has improved, as well to make recommendations for further improvements to your performance.
- You should evaluate the overall effectiveness of your PEP in improving your performance. You must also recommend strategies to further improve your level of fitness based on the effectiveness of your PEP.
- You must also recommend strategies to further improve your level of fitness based on the effectiveness of their PEP with the intention of ensuring their continuing success/improvement in physical activity and sport.
- The analysis should include:
- Plotting raw data from appropriate test results graphically
- The use of PARQ, graphs, charts, tables, and diagrams/flow charts to show evidence to support your analysis and evaluation
- Comparison and explanation of pre- and post-PEP fitness test results.

EXAMPLE A

The Evaluation

Week 1: As today was my first session I found myself very tired quickly and was out of breath a lot. My resting heart rate was 99 and I got a working heart rate of 202. Later in the week I found the circuit slightly easier but I still felt unfit and really tired by the end. The fartlek was quiet easy because I am used to running on different surfaces as when I play football the pitch is sometime wet or hard or boggy.

Week 2: The circuit was easier than last week but I was still breathing heavy by the end of it. I felt that I worked harder and that is backed up by my heart rate by the end of it was 220,18 more BPM than last week. My recovery time was around 15 mins. Again the fartlek was easy because I am used to running on

different surfaces as when I play football the pitch is sometimes wet or hard or boggy.

Week 3: The circuit is becoming increasingly easier as I didn't feel as tired by the end of it while still putting in the same effort. My recovery time was quicker, it was about 10 minutes afterwards when I started feeling less tired and I gained my breath back quicker also. My fartlek session was again easy but I struggled with the boggy ground this week as I wasn't fully fit because I my circuit training previous.

Week 4: I found the circuit easier than previously today as I had recovered really well from last week and I could start feeling the difference from week 1 to present day(when I'm writing this). As a result of this my recovery time was quicker, around 8 minutes. My fartlek session went better than last week as the condition were more stable and I could concentrate more on what I was doing instead of the weather. I could feel in my legs especially that they were not "suffering" from the session afterwards because I am now becoming better at running on different surfaces. My recovery time has now reached 5 minutes.

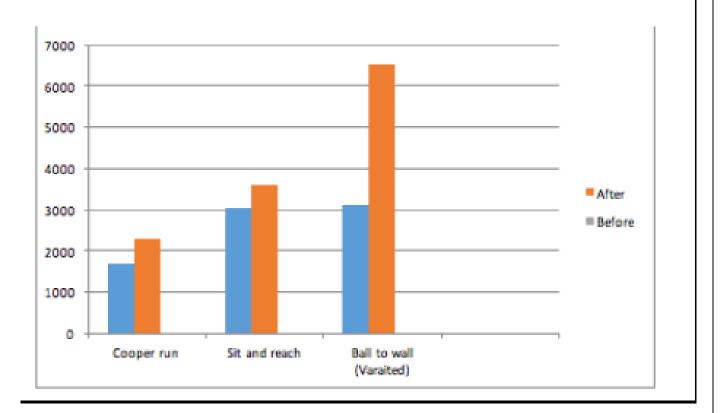
EXAMPLE B

Conclusion

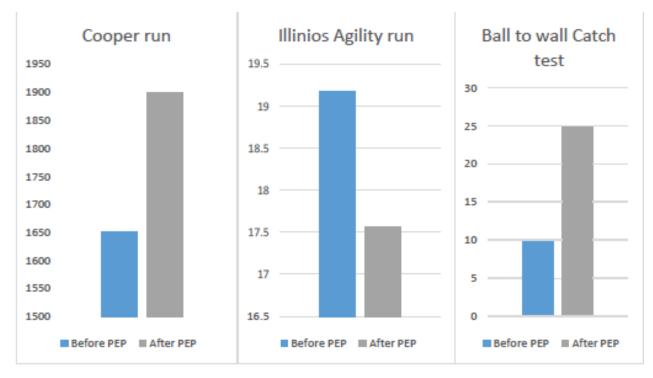
Pre heart rates: 67 , 64 , 70 bpm

Post heart rates: 74 , ,68 , 71 bpm

Fitness	Test	Results at the	Results at the end
component		start	
Flexibility	Sit and Reach test	17 cm	23cm
Cardiovascular	Cooper run	3050M	3590M
fitness			
Co-ordination	Ball to wall	31	65
	(football		
	variation)		



EXAMPLE C



Aim - The graphs and tables show that my cardiovascular endurance, agility and coordination have all improved from the start of the PEP to the end. Each week I set myself a target which I achieved. Overall I have exceeded my targets for cardiovascular endurance, agility and coordination, successfully achieving my aims.

Appendices

Front Cover Template Contents Page Template Practical Performance Authentication Sheet Personal Exercise Programme (PEP) Sheet PEP Training Record Form

Edexcel GCSE (9-1) PE

Personal Exercise Programme (PEP)

Name:

Candidate Number: ____

Contents Page

- 1. Sporting Profile
- 2. PEP Test Results
- 3. PARQ
- 4. Principles of Training
- 5. Circuit Details
- 6. The Evaluation
- 7. Conclusion