Component 4 (PEP)

GCSE (9-1) Physical Education

Pearson Edexcel Level 1/Level 2 GCSE (9-1) in Physical Education (1PE0)
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Introduction

This commentary should be read in conjunction with the document ‘Guidance on conducting the PEP’, located on the edexcel.com website (click on the document name or edexcel.com to access) the specification, in particular the section on the PEP (pages 28 to 36) and the student PEP.

This commentary provides a rationale for the marks awarded for Example PEP 1.

The PEP’s provide evidence for Assessment Objective 4:

- the ability of the candidate to analyse and evaluate performance.

The PEP accounts for 10% of the overall assessment.
Aim and planning analysis

Whilst it is helpful to provide an introduction to ‘set the scene’ too much time should not be spent on this as it will not contribute to the mark for the PEP. In this example relevant content begins on page 4 ‘My pre PEP fitness test results’.

My pre PEP fitness test results.

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooper run:</td>
<td>3050m</td>
</tr>
<tr>
<td>Abdominal Curl test:</td>
<td>35</td>
</tr>
<tr>
<td>Sit and reach:</td>
<td>17.5cm</td>
</tr>
<tr>
<td>Illinois Agility test:</td>
<td>17.12 s</td>
</tr>
<tr>
<td>Standing broad jump:</td>
<td>26 cm</td>
</tr>
<tr>
<td>Ruler drop test:</td>
<td>9 cm</td>
</tr>
<tr>
<td>30 metre sprint:</td>
<td>5.02s</td>
</tr>
<tr>
<td>Standing stork test:</td>
<td>10 seconds</td>
</tr>
</tbody>
</table>

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.

A number of fitness tests have been conducted, which is good practice and the achievement in the test is recorded. However, there is no analysis of this data. The student moves immediately from the test results to the areas of fitness they wish to improve, thus provides limited interpretation of fitness test results which places this aspect of the PEP at level 1. As a number of fitness tests have been conducted and the results recorded (using appropriate units) there is evidence for some credit at level 1.

This page of the PEP also makes reference to the training methods that will be selected by the student to improve their cardiovascular fitness, flexibility and coordination. It is impossible to tell from the student’s PEP whether these are appropriate choices for their level of fitness as no ratings have been provided of their fitness, however, we can establish if these are appropriate choices given the components of fitness they wish to improve. The two methods of training seem
appropriate choices for development of cardiovascular fitness. Also, as circuit training does allow a range of skill as well as fitness development, depending on the nature of the circuit, this may also be an appropriate choice to develop flexibility and coordination. The assumption therefore is that the training methods selected are appropriate. There is an attempt to justify the training method, although comments such as 'fits in with the available resources at school' would be considered a vague or weak justification.

It is worth noting here that it is not a requirement to select more than one method of training.

Page 5 of the PEP contains a PARQ, this is a required part of the PEP, but can be a centre devised PARQ, common therefore to all candidates within the centre. This should really be completed at the start of the PEP prior to any engagement in physical activity. The PARQ need not be commented on unless a response within the PARQ needs to be considered when establishing the intensity of the PEP. If there is no need to comment it could be placed as an appendix so that it does not impact on the available word limit.
Page 6 of the PEP is shown below. It includes reference to the principles of training and SMART targets.

### Principles of training

**Principles of training**

The best training programmes are usually built on the principles of specificity, overload, progression and reversibility. 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 to 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 50m at full speed and then recover quickly. For flexibility I want to be able to reach 25cm.

The reason for including SMART targets and the principles of training is to demonstrate how both will be used to achieve the students stated performance goal(s). Unfortunately, at this point the PEP does not contain specifically stated performance goal(s) therefore it is not possible to determine the relevance of the application of these principles to a performance goal.
No credit is given for replication of knowledge in isolation, remember the PEP is how students demonstrate their ability to analyse and evaluate. However, some credit can be given at level 1 for the highlighted statements below as they do briefly state how the principles might be applied:

**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.

**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.

At the bottom of page 6 the student does attempt to write some SMART targets, at this point they establish, with a little more clarity, the aim of their PEP:

**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.**

However, this does not provide much evidence of the application of SMART target setting. This could be easily rectified by taking all of the stated aspects of SMART and building an overall SMART target (which could then be used as the aim of the PEP), explaining how each aspect of SMART is being applied. E.g.

‘For cardiovascular fitness I want to run 60 meters in 10 seconds one week before the start of the season’. This is a specific, measureable and time-bound goal. My target is clear (run 60 meters), measureable (10 seconds) and time-bound (one week before the start of the season).

Clearly there would still be issues with this goal or aim as the focus should be on recovery if being used to measure cardiovascular fitness but at least we could see some clear application of SMART targets even if the target is flawed. Had rating data been provided with the fitness test results this could be expanded further to explain why the goal was achievable/realistic.

Note that by increasing the aims or goals the student increases the complexity of their PEP as this analysis and application would then be required for each fitness goal. Currently the clearest stated goal is for flexibility.

Pages 7 and 8 of the PEP contain details of the intended exercise sessions. It is here that students could annotate the intended session to identify, explain or justify their choice of activities in relation to their initial fitness levels and achieving their aims.
The circuit training session is described as follows below. There is an attempt to justify the method of training given the fitness goals. Reference is made to increasing the intensity in week three. Presumably this is to apply progressive overload – this could have been referenced at this point to reinforce the application of the principles of training. However, this might be more relevant to report on during the carrying out and monitoring of the PEP as it might be more appropriate to increase sooner or later depending on how easy the student finds the intensity of the PEP, once it is undertaken.

Further analysis could have been included with an explanation or justification for the inclusion of each specific activity within the circuit session. Again, plenty of opportunity to met the requirements of the PEP in terms of analysis but not yet taken or developed by the student.
Carrying out and monitoring the PEP

Remember, no marks are awarded for carrying out the PEP, however, this is still a critical part of the process, as without this, students will not be able to access any of the marks available for evaluation of their PEP and would therefore be limiting their potential marks to a maximum of ten out of twenty for this part of the course.

In order to provide a relevant and detailed evaluation, students will need to consider data collected during the carrying out and monitoring phase, thus it is critical that this is well-organised and students are aware of the data that would be appropriate to collect so that they do not miss an opportunity to do so.

The PEP should be carried out over six to eight weeks.

It is a requirement that a record sheet of each session is maintained and submitted within the PEP, for example an adaptation of the form shown in Appendix 3 (page 47) of the specification ‘Personal exercise programme training record form’ (shown below). These forms will not be counted in the word or page count but will provide valuable evidence for the student’s own evaluation of their PEP. **NB this form would be useful as the first record form but would need ‘heavy’ adaptation for subsequent sessions.** The top half of this form would only need completing once, heart rate might not be an appropriate measure (depending on the fitness component being developed) and there would be no value in repeating a description of the same training session each week. It is the final section of the form that will provide a useful record for the students to use later in their analysis and evaluation. For example, if a circuit, students may wish to record repetitions at each station, if weights, weight lifted, if continuous, time to complete a measured run and so on.

![Appendix 3: Personal exercise programme training record form](image_url)
Evaluation of the PEP

The student’s evaluation is shown below:

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.
The first part of the student's evaluation gives a week by week summary, commenting on their perceptions of their level of fitness and the relative ease with which the training sessions were completed. The content here would be described as a **limited evaluation**. Evaluations should focus on the effectiveness of the PEP to bring about the stated aim, looking in particular at:

- the application of the methods of training
- the SMART goals
- the principles of training

in bringing about the desired changes in fitness and the impact of this on performance.

Students may find it easier to make these evaluations if first they include post PEP fitness data so they can make comparisons between their fitness levels before completing the PEP and afterwards. It is at this point that any data collected over the six to eight weeks related to performance would also be helpful as the student could then evaluate whether the training was having the desired effect on performance.

Pre and post PEP data are included in this PEP in the student’s conclusion, although the reader is left to make their own comparison between the pre and post PEP data at this point.
The student has focused on three fitness tests, repeating only these three, this is highly appropriate as these tests focus on the areas of fitness being developed through the PEP. The student has included the raw data for these tests and provided a graph of the results.

Some basic conclusions can be drawn from this data, i.e. there is an increase in flexibility, an increase in cardiovascular fitness, evidenced by the increase in distance achieved in the Cooper run and an improvement in coordination.

Further information could be gathered from this data had the student used it a little more, for example, the table could have included fitness ratings, (poor, average and so on), this would have allowed analysis to determine whether the ratings had stayed the same despite improvements in the raw data, this could have been used to inform future planning. Similarly, an additional column or graph could have been created to show the difference in the pre-post PEP data. Had data been collected linked to performance this could also have been analysed and evaluated. For example, on page 3 of the PEP the student references the need for power to try to win aerial battles in football.

**Power:** The ability to do strength performances quickly (power=strength x speed). I need this skill in football because I need to try and win aerial battles and try and battle for the ball against the opposition most of the time while keeping up a high pace/intensity.

Had power been a component of fitness the student had selected to work on they could have kept data from each match or game of football of the number of aerial battles won, this could have been used in the evaluation to establish if the training had had the desired effect on performance.
The student conclusion does present the main findings based on the evidence presented.

As you can see my results improved in every test. I exceeded my targets in everything. All, my Cardiovascular fitness, my flexibility and my co-ordination. Next time I will try and reach even higher targets and use my PEP to get an even better understanding on how to make them appropriate and how to reach them. In order to continue my improvement, I will maintain these sessions but change them from time to time so they don’t become boring, e.g. my fartlek session could turn to swimming instead of running sometimes. This compares to UK averages because pre PEP I was average in everything and now I am above average in bail to wall and the cooper run but I am still average in sit and reach but still have improved.

There is also an attempt to say how this might be improved in the future but they are very superficial in nature, indicative of the work expected at level 1.

The PEP is well presented, within the word allowance (once graphs and tables are excluded from the word count) although there are omissions (e.g. session data and evaluations) and unnecessary content (e.g. descriptions and definitions of training principles and methods) which impact on its coherence in terms of the integration of the required elements of the PEP.

In its current format it would be paced at **level 1: 4 marks.** Remember students are being assessed on their ability to analyse and evaluate, there is no credit for ‘recall’. Therefore, this student has spent quite a bit of time completing unnecessary work, focus must be on completing a few pages of analysis and evaluation, i.e. the ‘thinking’ behind the structure of the PEP and then the evaluation of whether this brought about the intended outcomes.
PEP BOOKLET

Fartlek
Circuit
Football
1) Introduction

2) My PEP test results

3) Principles of training

4) Circuit details

5) The evaluation

6) Conclusion
Introduction:

This is a personal exercise programme (PEP) that will focus on my chosen sport of football. In the PEP I will try and identify my strengths as well as my weaknesses in this sport and I will be designing an exercise programme to improve two aspects of my fitness. I will mainly be judging my improve from my test results , before and after (my 6 week programme) and how I have improved in , in game situations.:

The five major components of fitness I need in my sport is....

**Agility:** The ability to change the position of the body quickly and to control the movement of the whole body. This component is vital in my sport especially as a centre forward as I need to be able to beat defenders to be able to score or help score a goal during matches.

**Co-ordination:** The ability to use two or more body parts together. This is also important to my game because I need to look for any space to drive or pass the ball into while being able to be dribbling or defending the ball. This asset is vital to support my team in a match. Additionally, this is as important to every attacking player on a pitch (like me). It could be a defence splitting pass or a last gasp winning shot ether way it is a crucial part of football.

**Speed:** The differential rate at which an individual is able to perform a movement or cover a distance in a period of time. This is important to my game because I need to be able to get past defenders or get into the box to tap in a cross on reach a rebound.

**Power:** The ability to do strength performances quickly (power=strength x speed).I need this skill in football because I need to try and win areal battles and try and battle for the ball against the opposition mostly all game while keeping up a high pace/intensity.

**Cardiovascular fitness:** The ability to exercise the entire body for long periods of time. This is another asset of my game because I can last whole matches of football which at are ages are 70-75 mins. During the matches I use my legs , arms, eyes e.c.t.
My pre PEP fitness test results.

Cooper run: 3050m
Abdominal Curl test: 35
Sit and reach: 17.5cm
Illinois 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.
Par Q Form

Name: __________________________ Date: 27th May 2016

Telephone: ________________________

Date of Birth: 4/7/02 Age: 13 Height: _______ Weight: _______

In Case of Emergency Contact: ______________ Relationship: _______

Address: __________________________

Physician: none Specialty: _______

Address: _______ Phone: _______

Are you currently under a doctor’s care: Yes ☐ No ☐

If yes, explain: __________________________

When was the last time you had a physical examination? 8 years ago

Have you ever had an exercise stress test? Yes ☐ No ☐ Don’t Know ☐

If yes, were the results: Normal ☐ Abnormal ☐

Do you take any medications on a regular basis? Yes ☐ No ☐

If yes, please list medications and reasons for taking: __________________________

Have you been recently hospitalized? Yes ☐ No ☐

If yes, explain: __________________________

Do you smoke? Yes ☐ No ☐

Are you pregnant? Yes ☐ No ☐

Do you drink alcohol more than three times/week? Yes ☐ No ☐

Is your stress level high? Yes ☐ No ☐
Principles of training

**Principles of training**—The best training programmes are usually built on the principles of specificity, overload, progression and reversibility. You can also use FITT to help remember the key things to consider when making programmes for individual goals.

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**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.

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**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 varied 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.
<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Circuit x1</td>
<td>Treadmill</td>
<td>Rest</td>
<td>Football</td>
<td>Rest</td>
<td>Training</td>
<td>Football Match</td>
</tr>
<tr>
<td>Week 2</td>
<td>Circuit x2</td>
<td>Treadmill</td>
<td>Rest</td>
<td>Football</td>
<td>Circuit x2</td>
<td>Training</td>
<td>Football Match</td>
</tr>
<tr>
<td>Week 3</td>
<td>Circuit x2</td>
<td>Treadmill</td>
<td>Rest</td>
<td>Football</td>
<td>Rest</td>
<td>Training</td>
<td>Football Match</td>
</tr>
<tr>
<td>Week 4</td>
<td>Circuit x3</td>
<td>Treadmill</td>
<td>Rest</td>
<td>Football</td>
<td>Circuit x3</td>
<td>Training</td>
<td>Football Match</td>
</tr>
<tr>
<td>Week 5</td>
<td>Circuit x3</td>
<td>Treadmill</td>
<td>Rest</td>
<td>Football</td>
<td>Rest</td>
<td>Training</td>
<td>Football Match</td>
</tr>
<tr>
<td>Week 6</td>
<td>Circuit x4</td>
<td>Treadmill</td>
<td>Rest</td>
<td>Football</td>
<td>Circuit x4</td>
<td>Training</td>
<td>Football Match</td>
</tr>
</tbody>
</table>

Details of session: Fartlek. This type of training method will improve my cardiovascular fitness, after 2 weeks I will increase the intensity of the sprinting and run for a longer time or distance. After 4 weeks I will again increase the intensity and push myself as far as I can in the sprinting parts.

**WARM UP**

Details of Fartlek. I will start of by going for a slow 5 minute jog, this will be classed as my pulse raiser and I will have enough energy to stretch my muscles. Then I will continue with dynamic stretches e.g. heel flicks to the end of the pitch and back. Finally I will end with static stretches focusing on my working muscles in my legs and holding each stretch for 20 seconds. By doing this I avoid any risk of injury from my training.

**MAIN ACTIVITY**

Jog 6 mins
Sprint 30 secs x 10
Run 12 mins AKA (The Academy Run)
Walk (recovery)3 mins

**COOL DOWN**

I will go for a slow jog from one side of the pitch to the half way line while doing dynamic stretches then static stretches held for 20 secs each.

Details of session: circuit. I will use this session to improve all three elements I have chosen. The leg and core stretches will improve my flexibility. The burpee will improve my cardiovascular fitness and the ball to wall (football based) and football kickups will improve my co-ordination. I will complete the circuit in the order shown so that I won’t work two of the same body parts in a row. This will make my session more even and will make it less likely that
there would be a possibility of me getting injured. The circuit will be the same every week but in the third week I will increase the intensity and the amount of rotations. Week by week I will repeat them more.

<table>
<thead>
<tr>
<th>Warm up</th>
<th>I will start by doing a pulse raiser so I have enough oxygen to safely stretch my muscles. Then I will continue with dynamic and static stretches-focusing on working the muscles in my legs and doing each stretch for 20 seconds.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Activity</td>
<td>Timings –work=1 min rest=20 secs</td>
</tr>
<tr>
<td>Circuit Training</td>
<td>Varilated ball to wall Football Juggling Burpees Shooting Slalom ladder Plank Sargent jump</td>
</tr>
<tr>
<td>Cool down</td>
<td>I will go for a slow jog half way up the pitch while doing dynamic stretches then followed by static stretches held for 10 seconds.</td>
</tr>
</tbody>
</table>

**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.

Week 5: I struggled a bit this week because my increasing intensity from last week has not made me in the best shape for this week’s session. I took the same amount of recovery time as last week but considering that I put in more effort I think that now I look back on it, it seems like it was acceptable. 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, and because I am now comfortable with this session.

Week 6: My final sessions were today so I knew I had to put more than 100% effort in and I did leading to a surprisingly quick recovery period of about 3 minutes. By the end of this I felt really happy with myself and I am also happy with the progress I have made. My final fartlek session went well as there were no problems and I felt like a completely different person afterwards because I was feeling fitter and healthier.
Conclusion

Pre heart rates: 67, 64, 70 bpm
Post heart rates: 74, 68, 71 bpm

<table>
<thead>
<tr>
<th>Fitness component</th>
<th>Test</th>
<th>Results at the start</th>
<th>Results at the end</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexibility</td>
<td>Sit and Reach test</td>
<td>17 cm</td>
<td>23 cm</td>
</tr>
<tr>
<td>Cardiovascular fitness</td>
<td>Cooper run</td>
<td>3050M</td>
<td>3590M</td>
</tr>
<tr>
<td>Co-ordination</td>
<td>Ball to wall</td>
<td>31</td>
<td>65</td>
</tr>
</tbody>
</table>

As you can see my results improved in every test. I exceeded my targets in everything. All, my Cardiovascular fitness, my flexibility and my co-ordination. Next time I will try and reach even higher targets and use my PEP to get an even better understanding on how to make them appropriate and how to reach them. In order to continue my improvement I will maintain these sessions but change them from time to time so they don’t become boring, e.g my fartlek session could turn to swimming instead of running sometimes. This compares to UK averages because pre PEP I was average in everything and now I am above average in ball to wall and the cooper run but I am still average in sit and reach but still have improved.
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Introduction

This commentary should be read in conjunction with the document ‘Guidance on conducting the PEP’, located on the edexcel.com website (click on the document name or edexcel.com to access) the specification, in particular the section on the PEP (pages 28 to 36) and the student PEP.

This commentary provides a rationale for the marks awarded for Example PEP 2.

The PEP’s provide evidence for Assessment Objective 4:

- the ability of the candidate to analyse and evaluate performance.

The PEP accounts for 10% of the overall assessment.
Aim and planning analysis

This PEP begins with the inclusion of a PARQ, a required component of the PEP, however, it need not be placed within the main pages of the PEP, instead it could be placed as an appendix and referred to in the analysis so that the word count is focused solely on the assessable aspects of the PEP, i.e. the student’s analysis and evaluation.

It is also worth noting that the student does not need to explain what a PARQ is, as this is AO1 (knowledge) and therefore is not assessed through this aspect of the qualification. Aside from the health and safety of the participant, the value of the PARQ is in identifying whether any medical conditions need to be considered when setting up the PEP.

What is a PARQ? Standing for Physical Activity Readiness Questionnaire, a PARQ is a form that tells if you need to check with your doctor before you partake in more physical activity. This is important because it tells you that you may not be able to do the exercise you want because you have an underlying issue.

![ParQ Health Questionnaire](image)
The next section of the PEP gives some information about the student’s performance in one of their practical activities. They use this to identify a weakness in their play that could help inform their aim for their PEP.

There is a clear link between their identified weakness in performance and their aim, this demonstrates some analysis in order to arrive at the stated aim.

**Performance**
The sport I am doing for my personal exercise program is netball. I play goal shooter (GS). I play regularly and play for my school netball team. My preferred position is goal attack but I only get to play this position when my team mate is unable to play. This is because they are able to keep up with play more than me and are more effective at getting free from their marker throughout the game.

**Aim**
To improve my cardiovascular fitness and agility so that I can be more effective losing my marker and can continue to work effectively throughout the netball match in the hope that I will be selected to play GA.

This student has opted to include data from three fitness tests, each test has an obvious link to either the areas of fitness identified as needing improvement or netball. Again, the choice of fitness tests shows good coherence, each part of the PEP analysis so far building naturally on the previous stage. Data is also collected for heart rate, this will provide another measure to discuss during the evaluation, and therefore is good practice. The student could also have included some match play data to link to the impact of not being able to get free from opponent, e.g. number of passes received or number of passes intercepted by opponent.

<table>
<thead>
<tr>
<th>Fitness testing</th>
<th>Test</th>
<th>Result</th>
<th>Rating</th>
</tr>
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<tbody>
<tr>
<td><strong>Cardiovascular endurance</strong></td>
<td>Cooper run</td>
<td>1650 m</td>
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<tr>
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<td>17 minutes</td>
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<td></td>
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The student has provided the ratings for their fitness test results, again this is good practice as it makes it clear the potential areas for improvement and makes comparison, after the PEP is completed, straight-forward. The ratings are used to identify the main weakness, although at this point there is limited justification/explanation why it was felt necessary to continue with the focus on agility.

NB students could, during the planning of the PEP, complete a battery of fitness tests and use the results to confirm the areas of fitness they wished to work on. For example, this student could have completed a number of tests and analysed the data from the test to establish their fitness strengths and weaknesses. Next they could analyse the requirements for their sport to see which area of fitness, if
improved, would have the greatest impact on their performance. Their justification/thought processes would form part of their analysis and would provide the rationale for their aim. Students are only required to work on one component of fitness.

These are potentially appropriate choices for the level of fitness, given the stated ratings, and the components of fitness the student wishes to improve. The assumption therefore is that the training methods selected are appropriate. There is some explanation to support the choice of training methods. This could be expanded on, for example, by giving the reasoning behind using interval training rather than Fartlek or continuous to improve cardiovascular fitness.

**Designing the programme** - (training methods, SMART targets, principles of training).

The methods of training I am going to use to improve these components of fitness are:

- Circuit Training
- Interval training

I have decided to use circuit training because it is so adaptable, I can design my circuits to develop cardiovascular fitness, but also include some stations to work on my agility and netball skills.

Also, I can adapt the interval training sessions so they are designed to increase my cardiovascular endurance.

It is worth noting here that it is not a requirement to select more than one method of training.

The reason for including SMART targets and the principles of training is to demonstrate how both will be used to achieve the students stated performance goal(s). Remember, no credit is given for replication of knowledge, therefore there is no need for the student to tell us the meaning of each aspect of the SMART principle. However, what is useful is the attempt to link each aspect of SMART to their aim.

**SMART** - The SMART principle is a way of achieving goals. It stands for:

Specific: This is knowing exactly what you want to achieve. In my PEP, I want to achieve better cardiovascular fitness, agility and coordination.

Measurable: This is being able to easily know when the goal has been achieved. I will be able to know if I have achieved my goal if I am able to run longer in my cooper run, for example.

Achievable: This is setting simple goals so that you know you can do it, like jogging 50 more metres every other day.

Realistic: This is making sure you know that your goals are achievable. For example, I know I will not be able to run 4000 m the cooper run in only 6 weeks.

Time-bound: This is making sure you have an end point. For my exercise plan, it is going to be happening for 6 weeks.

Using the SMART PRINCIPLE, my target or goal is to:

I want to be able to run 1800 m in the cooper run for cardiovascular fitness, to do the Illinois agility run in under 18 seconds for agility and to achieve above 20 catches in the throw and catch test for coordination.
Whilst the examples show different degrees of understanding they are a clear attempt to apply the principles to their overall fitness aim although there are no links from this to netball performance and the overall aim of the PEP.

Detail is also given about the principles of training. All but one of the principles are referenced (thresholds of training). It should be noted that all principles do not need to be included unless relevant, for example, at this point, for this student, there would be no need to consider reversibility, although thresholds of training might be worth considering, linked to training intensity for aerobic fitness. This section adds little in terms of providing evidence of the student’s ability to analyse what they are planning to do. Whilst the principles are defined the attempted link to demonstrate their application is extremely limited. For example, how progressive overload might be increased is not stated, comment could have been made here to potential changes to sets or reps or recovery time in the circuit session. Similarly, for specificity, rather than just reference netball a link could have been made to the specific aim. This is by far the weakest area of the planning section. It is worth noting that whilst we can see that the principles have been applied if we look at the sessions in the appendix this needs to be brought out by the student, otherwise it is the assessor who is completing the analysis rather than the student.

**Principles of training** – these are principles that improve skill, game ability and physical fitness.

**Progressive overload:** This is when the amount of training you do gradually increases as you become fitter. *This will be used in my exercise program by increasing the amount of exercise I do every week.*

**Specificity:** Your training need to match the sport you’re doing. For example, In my Personal Exercise Plan, I am going to be doing training that is necessary to netball.

**Reversibility:** This is when you stop training for whatever reason e.g. injury and your fitness level decreases. This could be applied to my PEP as I will make sure I wouldn’t over work myself so I don’t get injured so the PEP is going to be successful.

**Rest and recovery:** This is how you should take a period of rest between each rep to recover. I will include this in my PEP so I will not get injured.

**Individual needs:** Making your training specific to you. This is necessary in my PEP as I need to do things which are based on my age, gender, weight and fitness level.

Further analysis could have been included with an explanation or justification for the inclusion of each specific activity within the circuit session in relation to the stated aim/targets. The student could also plan to keep a record of the actual number of reps for each exercise so they can compare the results week on week. A better designed Training Record Form (see below) would facilitate this.

Overall in the planning section, fitness test data is analysed, potentially appropriate training methods have been selected given the student aims and SMART targets and the principles of training have been applied, thus overall this would be deemed a coherent and ‘good’ analysis. To progress to level 4 there would need to be greater depth to the analysis.
Carrying out and monitoring the PEP

Remember, no marks are awarded for carrying out the PEP, however, this is still a critical part of the process, as without this, students will not be able to access any of the marks available for evaluation of their PEP and would therefore be limiting their potential marks to a maximum of ten out of twenty for this part of the course.

In order to provide a relevant and detailed evaluation, students will need to consider data collected during the carrying out and monitoring phase, thus it is critical that this is well-organised and students are aware of the data that would be appropriate to collect so that they do not miss an opportunity to do so.

The PEP should be carried out over six to eight weeks.

It is a requirement that a record sheet of each session is maintained and submitted within the PEP, for example an adaptation of the form shown in Appendix 3 (page 47) of the specification ‘Personal exercise programme training record form’ (shown below). These forms will not be counted in the word or page count but will provide valuable evidence for the student’s own evaluation of their PEP. NB this form would be useful as the first record form but would need ‘heavy’ adaptation for subsequent sessions. The top half of this form would only need completing once, heart rate might not be an appropriate measure (depending on the fitness component being developed) and there would be no value in repeating a description of the same training session each week. It is the final section of the form that will provide a useful record for the students to use later in their analysis and evaluation. For example, if a circuit, students may wish to record repetitions at each station, if weights, weight lifted, if continuous, time to complete a measured run and so on.
Whilst this student does not use the example above, they do include a relevant alternative, i.e. an outline of the sessions, with intended targets and a summary of the sessions. There is a lot of captured data in the summary of the sessions which could be used in the final evaluation.

**Evaluation of the PEP**

Evaluations should focus on the effectiveness of the PEP to bring about the stated aim, using the data to look in particular at:

- the application of the methods of training
- the SMART goals
- the principles of training

in bringing about the desired changes in fitness and the impact of this on performance.

Pre and post PEP data is collected and included in this work. The results are shown in two formats, the graphs of the fitness test results clearly showing the difference in achievement.
There is some commentary, (under the heading ‘Aim’), describing the changes in
data, comparing the data sets and interpreting the meaning in relation to the
original fitness goals. Links have also been made to the sessions, although there
are some errors in the statements, for example, ‘the amount of ball to wall catches
doubled, from 10 to 20’, yet the tables indicate this increased to 25. It is also
worth noting here that actually a more relevant test, given the student’s aim, would
have been a test measuring shooting ability rather than a generic coordination test.

There is also an attempt to evaluate each aspect of the PEP design: aim, training
methods, SMART target, principles of training. The final paragraph of the write-up
outlines possible recommendations for improvement to the PEP.

| Training methods – clearly the methods I used were effective as my all my fitness aims were
achieved, however, I think that a Fartlek session might have been better than the interval
session as this would have better reflected the change in pace in the game and therefore
been more appropriate for netball, and in particular my position. The circuit training
worked well as it was easy to manage the increase in intensity when I wanted to work
harder. |
| SMART targets – my targets were SMART, I knew what I wanted to achieve and that this
was not beyond me, as shown by my results. I had a clear deadline to complete my targets,
and in fact I set more targets, giving myself a goal each training session, (see appendix 1). I
found this motivating and I am sure this helped me to improve. Although I managed all my
goals I think by focusing on just one I could have made even greater improvements. |
| Principles of training – you can see that each week I increased the intensity of the circuit to
bring about progressive overload. This was essential in order for my body to adapt and
increase my cardiovascular endurance. There was enough rest and recovery as although the
training made me tired I did not get injured or experience reversibility. |
| Recommendations - To improve my PEP, I could make my training sessions slightly different
each time so I wouldn’t get that bored of it because I did find it slightly boring at around
week 4-5, and push myself more and more each week to allow my fitness level to increase
even more. Additionally, next time I could use continuous training which would improve my
cardiovascular endurance even more. |

In conclusion, at the end of the six weeks, I have improved on the components of fitness I
have been focusing on. This PEP has allowed me to improve in netball as I have been able to
last in matches for longer before getting out of breath. Additionally, I have been able to do
changes of direction a lot quickly and easier. I have also noticed I have been able to throw

The student does evaluate their PEP, they compare data collected before and after
the PEP, they consider whether they have met their aim and the reasons for this in
relation to training methods, SMART targets and their application of the principles
of training. There are some appropriate recommendations made, with an attempt
to justify some of these. The PEP is well presented, and follows a logical order given
the requirements of the PEP. The focus is on analysis and evaluation and material
associated with the running of the PEP is kept in the appendix. The word count is
under the maximum of 1500 words (1354). Remember, graphs and tables are
excluded from the word count as are session plans in an appendix. Whilst ‘good’
overall, there are areas where the analysis and evaluation could be further
developed. With the removal of some of the unnecessary text (e.g. descriptions of
principles of training) this would be possible and still remain within the required
word limit.

In its current format this PEP would be paced at level 3: 10 marks.
Edexcel
GCSE (9-1)
PE
Personal Exercise Programme (PEP)

Name: XXXXXXXX
Candidate Number: XXXX
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Planning analysis
PARQ

What is a PARQ? Standing for Physical Activity Readiness Questionnaire, a PARQ is a form that tells if you need to check with your doctor before you partake in more physical activity. This is important because it tells you that you may not be able to do the exercise you want because you have an underlying issue.

ParQ Health Questionnaire

Please read the questions carefully and answer each one honestly, ticking the appropriate box or adding information if necessary. Your responses will of course be kept in the strictest confidence. This form must be completed, returned to a Fitness Advisor and assessed prior to availing of any induction services.

Name: ___________________________ Postcode: ___________________________

Contact tel no (mobile preferred) ___________________________ email ___________________________

Has your doctor ever said that you have had a heart problem?

No [ ] Yes [ ]

In the past month have you had any chest pain when:

You were doing any activity [ ] No [ ] Yes [ ]

You were resting [ ] No [ ] Yes [ ]

Are you currently taking medication for:

A heart condition [ ] No [ ] Yes [ ]

Any other problems [ ] No [ ] Yes [ ]

Do you suffer from any bone or joint problems?

No [ ] Yes [ ]

In the past year have you had any major illness or major surgery?

No [ ] Yes [ ]

Have you ever been diagnosed with...

Diabetes No [ ] Yes [ ]

Asthma No [ ] Yes [ ]

Epilepsy No [ ] Yes [ ]

Other problems No [ ] Yes [ ]

Are you pregnant?

No [ ] Yes [ ] EDD

Have you recently had a baby?

No [ ] Yes [ ] How long ago?

Do you ever...

lose your balance because of dizziness or lose consciousness No [ ] Yes [ ]

Are you feeling unwell at present due to cold, etc

No [ ] Yes [ ]

If you have answered YES to one or more questions we may need you to contact your doctor before starting to exercise. If your health changes so that you may then answer YES to any of these questions, tell a member of staff as soon as possible.

I have read, understood and completed this questionnaire.

Any questions that I had were answered to my full satisfaction.

Signature: ___________________________ Date: 17/06/16

Signature of Parent/Guardian (if aged 16 – 17) ___________________________
Candidate XXXX

**Performance**
The sport I am doing for my personal exercise program is netball. I play goal shooter (GS). I play regularly and play for my school netball team. My preferred position is goal attack but I only get to play this position when my team mate is unable to play. This is because they are able to keep up with play more than me and are more effective at getting free from their marker throughout the game.

**Aim**
To improve my cardiovascular fitness and agility so that I can be more effective losing my marker and can continue to work effectively throughout the netball match in the hope that I will be selected to play GA.

**Fitness testing**

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<tbody>
<tr>
<td>Cardiovascular</td>
<td>Cooper run</td>
<td>1650 m</td>
<td>Average</td>
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<tr>
<td><strong>endurance</strong></td>
<td></td>
<td></td>
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<td>Throw and catch</td>
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<table>
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<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Resting heart rate</td>
<td>75 bpm</td>
</tr>
<tr>
<td>Working heart rate</td>
<td>102 bpm</td>
</tr>
<tr>
<td>Recover rate</td>
<td>17 minutes</td>
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</table>

I decided to test these fitness components because of their relevance to netball and my weakness in netball.

- **Cardiovascular endurance**: This is the ability to run for long amounts of time. This is important to netball because you need to be able to run and perform for long periods of times (1 hour).
- **Agility**: This is the ability to change the position of the body quickly and to control the movement of the whole body. This is important to netball as changing of direction is a skill you need to be able to utilise.
- **Co-ordination**: This is the ability to use two or more body parts at the same time. This is important in netball as you need to use your hands, feet and vision at the same time.

The tests show that I need to work on my cardiovascular endurance, this will help me keep up with play and make it more likely that I will be selected to play in my preferred position. My agility is good, this is why at the start of the game I can lose my marker easily to make myself free to receive a pass.
Designing the programme - (training methods, SMART targets, principles of training).

Methods of training - The methods of training I am going to use to improve these components of fitness are:

- Circuit Training
- Interval training

I have decided to use circuit training because it is so adaptable, I can design my circuits to develop cardiovascular fitness, but also include some stations to work on my agility and netball skills.

Also, I can adapt the interval training sessions so they are designed to increase my cardiovascular endurance.

SMART - The SMART principle is a way of achieving goals. It stands for:
Specific: This is knowing exactly what you want to achieve. In my PEP, I want to achieve better cardiovascular fitness, agility and coordination.
Measurable: This is being able to easily know when the goal has been achieved. I will be able to know if I have achieved my goal if I am able to run longer in my cooper run, for example.
Achievable: This is setting simple goals so that you know you can do it, like jogging 50 more metres every other day.
Realistic: This is making sure you know that your goals are achievable. For example, I know I will not be able to run 4000 m the cooper run in only 6 weeks.
Time- bound: This is making sure you have an end point. For my exercise plan, it is going to be happening for 6 weeks.

Using the SMART PRINCIPLE, my target or goal is to:
I want to be able to run 1800 m in the cooper run for cardiovascular fitness, to do the Illinois agility run in under 18 seconds for agility and to achieve above 20 catches in the throw and catch test for coordination.

Principles of training – these are principles that improve skill, game ability and physical fitness.
Progressive overload: This is when the amount of training you do gradually increases as you become fitter. This will be used in my exercise program by increasing the amount of exercise I do every week.
Specificity: Your training need to match the sport you’re doing. For example, in my Personal Exercise Plan, I am going to be doing training that is necessary to netball.
Reversibility: This is when you stop training for whatever reason e.g. injury and your fitness level decreases. This could be applied to my PEP as I will make sure I wouldn’t over work myself so I don’t get injured so the PEP is going to successful.
Rest and recovery: This is how you should take a period of rest between each rep to recover. I will include this in my PEP so I will not get injured.
Individual needs: Making your training specific to you. This is necessary in my PEP as I need to do things which are based on my age, gender, weight and fitness level.
Candidate XXXX

The F.I.T.T Principle (Frequency, Intensity, Time and Type) - this is used to increase the amount the body does, in order to achieve overload.

Frequency: This is how often you do your training. This applies to my training as it allows me to know how often I should do my training.
Intensity: This is how hard you do your training. This will apply to my exercise program as we know how hard we can physically train so you don’t get injured.
Time: This is how long you train for. I will apply this to my training by knowing how long I should train for so I don’t over work myself.
Type: This is what type of workout you do. This is important because you need to do training that is suited to your sport. For example, in my sport, netball, you need to do training like circuit or interval, and not continuous or weight training because that is not necessary in that sport.

Frequency, Intensity and Time should increase as you become fitter and how training gets longer (progressive overload).

Carrying out and monitoring my PEP – please see Appendix 1
**Evaluation**

**Re-test post PEP** – comparison of pre and post PEP test results

<table>
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<tr>
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<table>
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</tr>
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<tbody>
<tr>
<td>Resting heart rate</td>
<td>75 bpm</td>
<td>68 bpm</td>
</tr>
<tr>
<td>Working heart rate</td>
<td>102 bpm</td>
<td>115 bpm</td>
</tr>
<tr>
<td>Recovery rate</td>
<td>17 mins</td>
<td>15 mins</td>
</tr>
</tbody>
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**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.
In the cooper run, I improved my results by 250 m, which I am very proud and happy with because I have always struggled with cardiovascular endurance. Additionally, I was able to decrease my time for the Illinois agility run by 1.18 secs, which shows my agility has improved greatly. Also the amount of successful ball to wall catches doubled, from 10 to 20, which shows my hand-eye coordination has improved.

I know my fitness level has increased, as I have been able to cope with the increasing intensity and the progressive overload. For example, especially at week 5, I found training surprisingly simple, even though I was doing a lot of exercise at one time.

My resting heart rate decreased by 8 bpm (75 bpm to 67 bpm), my working heart rate increased by 13 bpm (102 bpm to 115 bpm) and my recovery rate went from 17 minutes to 15 minutes. These results show that my heart has got stronger and larger, which shows my cardiovascular endurance has gotten much better.

All of this shows my PEP was successful as I was able to stick to all of my training. Additionally, I used progressive overload to allow myself to progress in my training every session. I always put 100% effort into all of my training so I know when I have improved. I also had no injuries which was good because if I did have one, it would have affected my training as reversibility would have occurred.

Training methods – clearly the methods I used were effective as my all my fitness aims were achieved, however, I think that a Fartlek session might have been better than the interval session as this would have better reflected the change in pace in the game and therefore been more appropriate for netball, and in particular my position. The circuit training worked well as it was easy to manage the increase in intensity when I wanted to work harder.

SMART targets – my targets were SMART, I knew what I wanted to achieve and that this was not beyond me, as shown by my results. I had a clear deadline to complete my targets, and in fact I set more targets, giving myself a goal each training session, (see appendix 1). I found this motivating and I am sure this helped me to improve. Although I managed all my goals I think by focusing on just one I could have made even greater improvements.

Principles of training – you can see that each week I increased the intensity of the circuit to bring about progressive overload. This was essential in order for my body to adapt and increase my cardiovascular endurance. There was enough rest and recovery as although the training made me tired I did not get injured or experience reversibility.

Recommendations - To improve my PEP, I could make my training sessions slightly different each time so I wouldn’t get that bored of it because I did find it slightly boring at around week 4-5, and push myself more and more each week to allow my fitness level to increase even more. Additionally, next time I could use continuous training which would improve my cardiovascular endurance even more.

In conclusion, at the end of the six weeks, I have improved on the components of fitness I have been focusing on. This PEP has allowed me to improve in netball as I have been able to last in matches for longer before getting out of breath. Additionally, I have been able to do changes of direction a lot quickly and easier. I have also noticed I have been able to throw
and catch the ball with ease, which shows I have been able to apply my training to my sport and hopefully I am getting nearer to playing GA.

### Appendix 1 - Carrying out and monitoring my PEP

<table>
<thead>
<tr>
<th>Week</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Circuit training (1) 20 seconds per station</td>
<td>Interval Training 1 hour</td>
<td>Rest</td>
<td>Netball 1 hour 30</td>
<td>10 min jog</td>
<td>Rest</td>
<td>Netball 1 hour</td>
</tr>
<tr>
<td>2</td>
<td>Circuit training (1) 25 seconds per station</td>
<td>Interval Training 1 hour</td>
<td>Rest</td>
<td>Netball 1 hour 30</td>
<td>10 min jog</td>
<td>Rest</td>
<td>Netball 1 hour</td>
</tr>
<tr>
<td>3</td>
<td>Circuit training (2) 30 seconds per station</td>
<td>Interval Training 1 hour</td>
<td>Rest</td>
<td>Netball 1 hour 30</td>
<td>15 min jog</td>
<td>Rest</td>
<td>Netball 1 hour</td>
</tr>
<tr>
<td>4</td>
<td>Circuit training (2) 35 seconds per station</td>
<td>Interval Training 1 hour</td>
<td>Rest</td>
<td>Netball 1 hour 30</td>
<td>15 min jog</td>
<td>Rest</td>
<td>Netball 1 hour</td>
</tr>
<tr>
<td>5</td>
<td>Circuit training (3) 40 seconds per station</td>
<td>Interval Training 1 hour</td>
<td>Rest</td>
<td>Netball 1 hour 30</td>
<td>20 min jog</td>
<td>Rest</td>
<td>Netball 1 hour</td>
</tr>
<tr>
<td>6</td>
<td>Circuit training (3) 45 seconds per station</td>
<td>Interval Training 1 hour</td>
<td>Rest</td>
<td>Netball 1 hour 30</td>
<td>20 min jog</td>
<td>Rest</td>
<td>Netball 1 hour</td>
</tr>
</tbody>
</table>
**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:**

![Diagram of circuit training exercises]

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.
<table>
<thead>
<tr>
<th>Station</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 5</th>
<th>Week 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Squats</td>
<td>Target: 15</td>
<td>Target: 17</td>
<td>Target: 19</td>
<td>Target: 21</td>
<td>Target: 23</td>
<td>Target: 25</td>
</tr>
<tr>
<td>Lunges</td>
<td>Target: 10</td>
<td>Target: 13</td>
<td>Target: 15</td>
<td>Target: 17</td>
<td>Target: 19</td>
<td>Target: 21</td>
</tr>
<tr>
<td>Illinois Agility Run</td>
<td>Target time: 19 secs</td>
<td>Target time: 18.70 secs</td>
<td>Target time: 18.40 secs</td>
<td>Target time: 18 secs</td>
<td>Target time: 17.60 secs</td>
<td>Target time: 17.30 secs</td>
</tr>
<tr>
<td>Sprints from one line to another</td>
<td>Target sprints: 7</td>
<td>Target sprints: 8</td>
<td>Target sprints: 9</td>
<td>Target sprints: 10</td>
<td>Target sprints: 11</td>
<td>Target sprints: 12</td>
</tr>
<tr>
<td>Sit ups</td>
<td>Target: 10</td>
<td>Target: 13</td>
<td>Target: 16</td>
<td>Target: 19</td>
<td>Target: 22</td>
<td>Target: 25</td>
</tr>
<tr>
<td>Press ups</td>
<td>Target: 10</td>
<td>Target: 12</td>
<td>Target: 14</td>
<td>Target: 16</td>
<td>Target: 18</td>
<td>Target: 20</td>
</tr>
<tr>
<td>Running through Ladders</td>
<td>Target: 4 times</td>
<td>Target: 4 times</td>
<td>Target: 5 times</td>
<td>Target: 5 times</td>
<td>Target: 6 times</td>
<td>Target: 6 times</td>
</tr>
<tr>
<td>High knees</td>
<td>Target time: 20 secs</td>
<td>Target time: 25 secs</td>
<td>Target time: 30 secs</td>
<td>Target time: 35 secs</td>
<td>Target time: 40 secs</td>
<td>Target time: 45 secs</td>
</tr>
<tr>
<td>Star jumps</td>
<td>Target: 20</td>
<td>Target: 25</td>
<td>Target: 30</td>
<td>Target: 35</td>
<td>Target: 40</td>
<td>Target: 45</td>
</tr>
<tr>
<td>Planks</td>
<td>Target time: 20 secs</td>
<td>Target time: 25 secs</td>
<td>Target time: 30 secs</td>
<td>Target time: 35 secs</td>
<td>Target time:</td>
<td>Target time:</td>
</tr>
</tbody>
</table>
**Details of session: Interval**

Interval training will help me improve my cardiovascular fitness and netball performance. As I get fitter, I will increase the time I run and sprint to as far as I can and hopefully decrease the amount I walk for as my recovery rate gets better.

<table>
<thead>
<tr>
<th>Warm Up</th>
<th>Firstly, I will do a pulse raiser to get my heart pump oxygen around my body quicker. In this warm up, I will do a jog for 30 seconds. Then I do high knees for 30 seconds. After this, I do heel flicks, for 30 seconds. Now I do some 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.</th>
</tr>
</thead>
</table>
| Main activity | • Sprinting- 30 seconds  
• Walking- 20 seconds  
• Running- 5 minutes  
• Walking- 20 seconds  
• Sprinting- 30 seconds |
| Cool Down | 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. Cool down also help remove waste products like lactic acid and carbon dioxide. |

**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.
**Week 3- Interval:** I felt that when I was running, it was a lot easier to go a longer distance and when I was sprinting, I didn’t find it very difficult either. So altogether, I think this was the easiest session I had done. However nothing has changed in my resting heart rate, working heart rate or my recovery rate which I find quite surprising as I went through the session that easily.

**Week 4- Circuit:** Today was the first day I got through all of the training without getting too out of breath and without stopping which I am very proud of as it is a very hard thing to do especially because it was the first time I did it twice. Both my working and resting heart rate improved by 1bpm and my recovery rate improved by 30 seconds.

**Week 4- Interval:** I also got through all of the training for the first time. Because I started to find this easier, when I was running, I ran as far as I could which was 1200 metres before I got too out of breath. My heart rates or my recovery rate didn’t change since my circuit training yesterday.

**Week 5- Circuit:** I found the whole training session surprisingly easy and I got through it all without a problem. My resting heart rate and my recovery rate hasn’t changed, however, my working heart rate reached a peak of 111bpm which I find as a big achievement.

**Week 5- Interval:** I found this training session surprisingly easy and I finished it without too much of a problem. However, about half way through the session, I had stitch because I ate a big meal only half an hour before which made me sit down for about 15 mins, which is probably why my peak working heart rate wasn’t as high as my previous trainings. Nothing has changed since my circuit training yesterday.

**Week 6- Circuit:** doing each station for 40 seconds was quite hard because the intensity was a lot higher than I was used to but I managed to still get through the whole session. My resting heart rate decreased to 67bpm, my working heart rate improved by 26bpm to 113bpm and my recovery rate decreased to 14 minutes and 30 seconds.

**Week 6- Interval:** this was the easiest training session I have ever done that I even did it twice which I am very proud of because it is my first time doing it for that long and I was successful. However, I did the cool down for a longer period of time than usual but I expected that because I was working for so much longer. My resting heart rate and my recovery rate didn’t change however, my working heart rate rose to 115 bpm.