Physical Education

A Level

Physical Education

Exemplar Candidate Work

with Commentaries

G452 and G454

November 2014

www.ocr.org.uk

OCR
Oxford Cambridge and RSA

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The exemplars in this document have been re-typed for ease of reading but are taken from real candidate work and therefore include the original spelling and grammatical errors made by the candidates at the time.

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COMMENTARIES

AS PHYSICAL EDUCATION – G452 LOG BOOKS

(A) Outdoor and Adventurous Activities - Snowboarding

All the necessary aspects are present.

A well presented log book.

However it is a weak log book which has some aspects covered reasonably well but generally lacks detail. The course/slope details and evaluative comments are particularly vague. The equipment section is well covered and the safety and ethics sections are covered reasonably well.

Low Band 3 - 13 marks

It meets the descriptors for band 3 having most of the prescribed information present but lacks detail and is therefore placed at the bottom of the band.

(B) Outdoor and Adventurous Activities – Skiing

A reasonable log book.

Coverage of the course/slope details are a little vague but personal and group equipment is well covered. The nutritional aspect is covered reasonably well but is a little superficial in parts.

Evaluative comments needed to be focussed more on the actual skiing assessment as indicated in the log book content.

Low band 2 – 20 marks

Meets the descriptors for band 2 having all the prescribed information present, but whilst some aspects are well covered one or two lack depth and detail.

(C) Outdoor and Adventurous Activities – Kite Surfing

This log book has been included as an example of a special activity submission. Should you be interested in further information on the Kitesurfing criteria please contact OCR on PE@ocr.org.uk

The submission identified that in addition to the 'normal' aspects of this activity profile's Log books that the candidate should give details of the environmental conditions during the assessment.

The Log covers all the necessary aspects but several lack detail particularly coverage of the environmental conditions, equipment, nutritional planning and evaluative comments.

Mid band 3 – 17 marks

(D) Safe and Effective Exercise – Circuit Training

A well presented log book.

The candidate has made several errors which suggest not enough attention has been paid to the assessment criteria, there are several rubric infringements which will deny the candidate accessing the full range of marks available. Examples of this are: only 6 weeks covered instead of 12, 3 of the prescribed exercises in the body weight circuit are not present. There are similar rubric infringements in the Free Weights programme where the correct exercises have not been selected. It is essential that candidates receive guidance from centres to ensure that they meet the assessment requirements of the activity and the log book.

There is also no justification of the use of dumb bells in the body weight squats exercise as is required by the assessment criteria (Coursework Guidance Booklet Page 182)

The goals of the exercise programme are also vague, as is the rationale for the programme.

There are no details of the personal warm up but the candidate was given the benefit of the doubt as a generic warm up is described; but in addition to this there is no mention of a cool down. Additional information relating to the warm up is to be found in their evaluation section. The generic warm up is not the one used by the candidate.

There is no coverage of the Health and Safety implications for the programme.

There is little demonstration of awareness and understanding of the principles of training and their application.

Low band 3 – 13 marks

This is a best fit scenario. The candidate has detailed descriptions of most aspects required but is limited in terms of the rubric infringements and the failure to cover some of the required aspects.

(E) Outdoor and Adventurous Activities – Skiing

A weak Log Book.

There are no evaluative comments on the actual assessment.

The details of the course used for the actual assessment are vague with no depth. All the other aspects covered lack both depth and detail.

Mid band 4 – 9 marks

Meets the band 4 descriptors as some, not all of the aspects are present. Those aspects present lack any depth and detail as indicated in the descriptors.

(F) Safe and Effective Exercise – Circuit Training

This candidate seems to have been a little careless, as despite having the assessment criteria in the Log Book there are rubric infringements in their programmes which mean that they cannot access the full range of marks available for the activity. The candidate's body weight exercise only contains six of the ten prescribed exercise and the other programme is incorrect. Centres need to be much more proactive in ensuring that candidates comply with the assessment rubric.

All aspects required in the log book are present. The goals identified by the candidate are however vague and for higher marks need to be much more specific.

The candidate's coverage of progression within their programme is also lacking in detail and needs to show much more understanding and application of this training principle.

Low band 2 – 20 marks.

Low Band 2 as all aspects are present in an extensive log book but details of progression are vague and the goals of the exercise programme needed to be far more specific.

A2 PHYSICAL EDUCATION – G454 LOG BOOKS

(G) Officiating

An excellent log book which covers all aspects required in detail apart from Child Protection procedures which, whilst covered, lacked detail.

Mid band 1 – 37 marks. It meets the Band 1 descriptors as it is detailed and comprehensive in all aspects bar child protection procedures.

(H) Outdoor and adventurous Activities – Surfing

An excellent log which contains all the required aspects.

However, nutritional planning, lacked depth and detail as did the explanation of boards.

Low band 1 – 35 marks

It meets the Band 1 descriptors in all the aspects except nutritional planning and the explanation of boards.

(I) Outdoor and Adventurous Activities – Equestrian – Show Jumping

A log book which was incomplete.

There was no coverage of the candidate's evaluative comments in relation to the course that was used for assessment. There was also little coverage in the log of details of the course used for assessment. The coverage of safety principles and ethics was again lacking in detail and discussion.

Mid band 3 – 20 marks

This log is placed in band 3 as there are some aspects not present and others which are poorly covered; safety principles, ethics and the jumping course covered. This was considered to meet the descriptor 'most.'

(J) Safe and Effective Exercise – Circuit Training

A good Log Book.

The goals of the programme need to be more specific and measurable. The candidate shows poor understanding of the principles of training as the programme is only implemented once a week and this is not mentioned in their evaluation. The candidate refers to frequency in their coverage of the principles of training.

The candidate's authentication statement by a qualified instructor is poor as it does not verify that the programme has been implemented.

Mid band 2 – 29 marks

Placed in the middle of band 2 as in most aspects it is extensive and detailed and most of the evidence is present.

AS G452 LOG BOOKS

CANDIDATE A

Outdoor and Adventurous: Snowboarding

Physical Education

OCR Advanced Subsidiary GCE Unit G452
Log book cover sheet and authentication statement:
Outdoor and Adventurous Activities – Skiing, Snowboarding

Centre Number		**Centre Name**	
Candidate Number		**Candidate Name**	

Please indicate below to which Outdoor and Adventurous Activity the log book and authentication statement relates.

Log book element required	**Present? (please tick)**
Details of the course/slope undertaken for the assessment	
Details of personal equipment and the reasons for taking it	
Details of group equipment and the reasons for taking it	
Discussion relating to safety principles applied	
Details of the code of ethics relevant to the activity	
Details of nutritional planning	
Evaluative comments in relation to the course/slope undertaken for assessment	

Assessment Band Descriptor which log conforms to

Band 1: A detailed and comprehensive log containing all the prescribed information is present	
Band 2: A detailed log containing all the prescribed information is present	
Band 3: A detailed log containing most of the prescribed information is present	
Band 4: A log containing some of the prescribed information is present	
Band 5: A log containing little of the prescribed information is present	
Mark Awarded	

Authentication statement
I can confirm that this candidate has fully completed the activity as detailed in this log book, meeting all health and safety requirements, and that the material in this log book is the candidates own work.

Name of instructor/teacher responsible	

Signature		Date	

Hemel-Hempstead Snow dome

I spent two hours shortly after my winter ski trip, at the Hemel-Hempstead Snow dome facility, performing the criteria found on the OCR site.

Les Trois Vallées – France

Staying down the gondola from Meribel, allowed me to explore the area of 'Les Trois Vallées' which consists of Meribel, Courchevel and Val Thorens.

Some of the Other Ski resorts/ regions I have snow boarded;

Ötztal, Sölden – Austria

Zell am Ziller – Austria

Grindlewald – Switzerland

La Tania – France

Lake Tahoe - USA

Four Days snowboarding in the three Valleys'

Video consists of footage from all four days.

This includes some of the runs completed during the trip each day.

Day1) combs (red), Alouette (red), Mur (red) Pelozet (blue), Alpage (red), petit Freud (blue), Menuires (blue), Ecureuil (black), Grand Lac (blue).

Day2) Jerusalem (red), Creux (red), Allamandes (red), Biolley (blue), Paturages (blue), Cerf (red), Niverolle (red), Gelinotte (blue), Mauduit (red).

Day3) Mur (red), Chardonneret (blue), Bas (red), Ecureil (black), Teppes (red), Combe pylone (black), Combe saulire 9(red), creux (red).

Day4) Altiport (blue), Aige (red), pylons (black), lagovede (red), Sanglier (black), Lo zest (green), David Douillet (red), Trois Marches (blue), Gaston (blue), Stade Desente (red).

Assessment

This was filmed both during the February half term and Wednesday evening the following week, in Frances 'Les Trois vallees' and Hemel-Hempstead 'Snow Dome'. All footage in France was on red and black runs to best show my ability, I attempted to find the quietest areas for filming and kept low so that visibility was best.

Equipment

Having the necessary equipment is essential for snowboard safety on the slopes. During my trip, whilst boarding I always had the following equipment to hand:

- Snowboard (fitted to my measurements and ability, I use a 'HEAD' board designed for heightened performance in the slalom.)
- Boots (Perfectly fitted to my snowboards bindings to allow for optimum response on turns.)
- Outer layers -
  - Ski jacket (made of waterproof, breathable material and highly insulating to keep me warm in cool conditions.)
  - Ski trousers (also waterproof, breathable and flexible to allow as much movement as possible.)
- Inner layers -

  - Thermals (the base layer which is designed to absorb sweat and dry quickly to keep me warm.)
  - Torso secondary layer (either a jumper or a fleece which allows the escape of sweat whilst keeping me warm.)
- Goggles (with strong UV protection my goggles are designed to protect my eyes from the suns reflection off the snow which can cause blindness.)
- Gloves (Tight fitting and water resistant, they provide vital insulation to an region that is easily damaged by the cold.)
- Hat (insulating my head is vital due to a high percentage of heat being lost from the area.)
- Ski socks (a source of insulation for extremities and protection from rubbing of the boots.)

Some people choose to wear helmets, in counties such as Austria it is mandatory for minors to wear the equipment, I feel safe and in control enough to not

Safety

To remain safe whilst competing in this sport you must have the correct equipment, trust in the group and your own ability, and finally understanding of the slopes and runs you will be competing. Weather conditions should be monitored as they can often vary and become dangerous, if you do not feel confident stop as soon as possible. Make sure you have a strong understanding of all symbols especially for avalanche warnings, which is one of the most dangerous problems that could occur.

Make sure the group sticks close and everyone is in sight as so not to loose members. Create planned stops, as so there is a base point for any members who become lost.

The high altitude can effect the respiratory and cardiac system and so should be monitored, if any feelings of drowsiness, nausea, headaches etc. Then stop immediately and seek assistance from group members.

The Code Of Ethics

This is the generic code for any slope user be it boarder or skier.

- Always stay in control. You must be able to stop or avoid other people or objects.
- People ahead of you have the right-of-way. It is your responsibility to avoid them.
- Do not stop where you obstruct a trail or are not visible from above.
- Before starting downhill or merging onto a trail, look uphill and yield to others.
- If you are involved or witness a collision or accident, you must remain at the scene and identify yourself to the Ski Patrol.
- Always use proper devices to help prevent runaway equipment.
- Observe and obey all posted signs and warnings.
- Keep off closed trails and closed areas.
- You must not use lifts or terrain if your ability is impaired through the use of alcohol or drugs.
- You must have sufficient physical dexterity, ability and knowledge to safely load, ride and unload lifts. If in doubt, ask the lift attendant.

Nutrition

As this sport takes place in extreme weather it is necessary to keep energy levels and hydration high. Calorie level will be higher than average, with diet containing both a mixture of protein and carbohydrates during the sports participation.

Hydration is a key element, stops should be made every 10- 15 minutes during sport to re-hydrate to prevent complications.

An advised meal for mid-day would be spaghetti bolognaise with multiple hydrating drinks and a pudding to keep sugar and energy levels up. A large intake of Protein is helpful when boarding, aiding in repair of muscles that have been damaged during the day. This high calorie diet should be discontinued on return from sport as is only helpful in

low temperature conditions.

Self Evaluation

I believe that I demonstrate a strong understanding of the safety procedures and necessary equipment needed for this sport and understand why they are so important.

I show a well-informed understanding of the code of ethics for the slopes, and show that I am considerate of other performers whilst on the slopes.

My targets are to decrease the time in which I complete a course and neaten up my linked turns making them sharper and quicker.

CANDIDATE B

Outdoor and Adventurous: Skiing

Physical Education

OCR Advanced Subsidiary GCE Unit G452
Log book cover sheet and authentication statement:
Outdoor and Adventurous Activities – Skiing, Snowboarding

Centre Number		**Centre Name**	
Candidate Number		**Candidate Name**	

Please indicate below to which Outdoor and Adventurous Activity the log book and authentication statement relates.

Log book element required	**Present? (please tick)**
Details of the course/slope undertaken for the assessment	
Details of personal equipment and the reasons for taking it	
Details of group equipment and the reasons for taking it	
Discussion relating to safety principles applied	
Details of the code of ethics relevant to the activity	
Details of nutritional planning	
Evaluative comments in relation to the course/slope undertaken for assessment	

Assessment Band Descriptor which log conforms to

Band 1: A detailed and comprehensive log containing all the prescribed information is present	
Band 2: A detailed log containing all the prescribed information is present	
Band 3: A detailed log containing most of the prescribed information is present	
Band 4: A log containing some of the prescribed information is present	
Band 5: A log containing little of the prescribed information is present	
Mark Awarded	

Authentication statement
I can confirm that this candidate has fully completed the activity as detailed in this log book, meeting all health and safety requirements, and that the material in this log book is the candidates own work.

Name of instructor/teacher responsible	

Signature		Date	

Contents Page:

- Details of the course/slop undertaken for the assessment.
- Details of personal equipment and the reasons for taking it.
- Details of group equipment and the reasons for taking it.
- Discussion of the safety principles to be applied.
- Identification of the code of ethics to be followed.
- Details of nutritional planning
- Evaluative comments in relation to the skiing.

Details of the course/slope undertaken for the assessment

Practice sessions:

- Brentwood Ski & Snowboard Centre – 22nd November
- Xscape Snozone (Milton Keynes) – 10th January

Ski Trip:

- Kitzbuhel, Austria – 18th – 25th February

Other regions I have previously skied:

- Wagrain, Austria
- Flachua, Austria
- Salzburg, Austria

Day 1 – 19th February:

On the first day, the group mainly skied in Flachau and Hochfeld. During the day, we completed 7 red runs, 3 black runs and a blue run. Some of the runs completed were Hochfeld 1, Hochfeld 2 and Jodlahm 1a.

Day 2 – 20th February:

On the second day, the group skied in Penzing, a nearby resort. During the day, we mainly completed some of the longer black runs from just below Kitzbuheler Horn. Some of the runs completed were Penzing 5a and 6a and Bauernpenzing.

Day 3 – 21st February:

The third day consisted of visiting Baumoss and skiing around that area. The group did 3 blacks, 3 reds and 3 blue runs before going to a ski-park where moguls and small jumps were available. Some of the runs completed were Harschbichl 1a and 1b as well as Baumoss 2a.

Day 4 – 22nd February:

On the fourth day we visited Aurach. We did a few runs before the assessment video on Asten which included black run Hornkopfl and red runs Bahnhoff 2a and 1b.

Day 5 – 23rd February:

The fifth day involved going to St.Johann where the group mainly stayed on the Haupt-Kassa trail doing a mixture of black and red runs which included Angerfaralm and Haupt Kassa 2a.

Day 6 – 24th February:

The final day of trip saw the group remain in Kitzbuhel for the day. After tackling the main black and red runs of Badewelt 5a and 6a, we decided to go off piste and try out moguls as well as skiing in thick snow.

Assessment:

The videoing took place on day 4 of the trip on Asten, a red run. I selected this slope as it was not to far up the mountain and so visibility was very clear for the assessment whereas some of the slopes at higher altitude often have heavy snow or low clouds to lower visibility.

Discussion of personal equipment and the reasons for taking it:

Due to the extreme conditions in the mountains, the correct equipment is essential to ensure safety while skiing. I took the following things:

- Skis – it is important that they are fitted to my height and weight. Also, the bindings which connect to the boot to the ski need to be correctly adjusted so that they can release the ski from the boot if the pressure is high. In a fall, this will help to prevent injuries.
- Ski boots – as mentioned they will release when under high pressure but will allow some ankle movement. The tongue of the boot is to be pressed against the shin which needs the knee slightly.
- Ski poles – the poles should be proportional to my height and come up to around the hip area. Also, they have a strap to be held which prevents them being lost in a fall or left higher up the mountain.
- Helmet – fitted for individual head size. A necessity on all slopes now, especially on off piste runs where the danger of falling is greater.
- Ski socks – Insulated socks which trap air and disperse sweat from the foot.
- Hat – thick and insulated to prevent heat loss from the head and keeps ears warm. Also, it is helpful when eating at a restaurant as you may wish to take your helmet off while keeping your head warm.
- Gloves – I have pig skin, waterproof gloves which allow movement while also preventing snow from entering the glove via an elastic strap.
- Goggles – essential wear to prevent heavy sunlight exposure to the eyes (they are protected through the UV screens) and to improve visibility when snow is heavy. They also have different colour reflections based on the visibility, which can be changed to suit conditions.
- Thermals – base layer of long sleeve top and trousers which trap air and keep the body room as well as dispersing sweat.
- Mid layer fleece – a lightweight fleece to keep the core warm as not a lot of kinetic energy takes place here compared to the legs. Hence the need for further insulation.
- Ski jacket – a light, movement assistant jacket which also traps air. This provides the third layer of insulation which is very beneficial at high altitude where temperatures can be well under zero degrees Celsius. It also has a form of barrier to prevent snow entering the jacket.
- Salapets (ski trousers) – Waterproof and padded out which stops snow being absorbed which the padding absorbs shock.

Details of group equipment and reasons for taking it:

- Mobile phone – in case the group goes off course and becomes lost it can be used to keep in touch and meet up again
- 2 in 1 Sun cream/Lip balm – High factor sun scream is essential as the reflection of the sun of the snow is strong and could cause burns. Lip balm will be used to reduce the effects of the wind, cold and sun of the lips.
- Map of mountain – allows the group to determine which runs to go on and their distance. Can also be used if the group go off course.
- Money – to buy food and drink at the many restaurants up and down the mountain.
- First aid kit – plasters, bandages, paracetamol and duct tape all carried in case of an injury or ripped clothing.
- Rucksack – to carry of all of the above equipment while skiing.

Discussion of the safety principles to be applied:

Conditions at altitude can change quickly from one extreme to another, therefore preparation and knowledge are key. By packing essential equipment and having a good knowledge of the various pistes it is important as you may have to quickly exit the piste if the weather becomes too bad. It is always a good idea to check the weather information either before you leave the hotel or just before getting on at ground lifts which usually display tempretures and snow warnings on televisions. The televisions may also display information about lift closures and pistes which are too icy to be skied on. These need to examined carefully as to plan routes for the day.

It is important to pay attention and take avalanche warnings seriously as they could potentially be very dangerous and the group will need to exit the piste rapidly.

Exercising at altitude is harder on the body as the air is less saturated with oxygen and therefore it can fatigue much quicker. Without sustaining energy levels, illnesses such as altitude sickness could occur or feeling faint. A way to prevent this will be to stay hydrated and eat well at stops along the amount. We also will carry snacks which can be eaten when travelling up the mountain via a ski lift.

Finally, to avoid losing members of the group we skied in a snake like line and stopped in a convenient and safe place (not obstructing other skiers) if someone fell over which allowed them to catch up to the group.

Identification of the code of ethics to be followed:

The International Ski Federation (FIS) has ten safety rules which consist of the following:

1. **Respect for others**

A skier or snowboarder must behave in such a way that he does not endanger or prejudice others.

2. **Control of speed and skiing or snowboarding**

A skier or snowboarder must move in control. He must adapt his speed and manner of skiing or snowboarding to his personal ability and to the prevailing conditions of terrain, snow and weather as well as to the density of traffic.

3. **Choice of route**

A skier or snowboarder coming from behind must choose his route in such a way that he does not endanger skiers or snowboarders ahead.

4. **Overtaking**

A skier or snowboarder may overtake another skier or snowboarder above or below and to the right or to the left provided that he leaves enough space for the overtaken skier or snowboarder to make any voluntary or involuntary movement.

5. **Entering, starting and moving upwards**

A skier or snowboarder entering a marked run, starting again after stopping or moving upwards on the slopes must look up and down the slopes that he can do so without endangering himself or others.

6. **Stopping on the piste**

Unless absolutely necessary, a skier or snowboarder must avoid stopping on the piste in narrow places or where visibility is restricted. After a fall in such a place, a skier or snowboarder must move clear of the piste as soon as possible.

7. **Climbing and descending on foot**

A skier or snowboarder either climbing or descending on foot must keep to the side of the piste.

8. **Respect for signs and markings**

A skier or snowboarder must respect all signs and markings.

9. Assistance

At accidents, every skier or snowboarder is duty bound to assist.

10. Identification

Every skier or snowboarder and witness, whether a responsible party or not, must exchange names and addresses following an accident.

Details of nutritional planning:

As previously mentioned, skiing requires a lot of energy due to the conditions it is being performed in. Due to this factor, the calorie intake per day needs to be higher than the recommended 2500 calories for an adult male. Before exercising I will be eating carbohydrates followed by a mix of protein and carbohydrate for growth and repair of muscles afterwards. Here is an exemplar meal plan for the day:

- Breakfast = Cheese, bread, fruit and milk
- Lunch = Large bowl of pasta and meatballs.
- Snacks = Hot chocolate/fruit.
- Evening meal = Soup with bread, Steak and chips, pudding.

Throughout the day, many bottles of water will be drunk as it helps to keep hydration high as lots of water will be lost through sweat whilst exercising. Also, it helps recovery of the muscles for the next day of skiing.

In total, this meal plan calculates as just over 3000 kcal. Although it may seem a lot and not healthy. It is essential to aid recovery primarily, but also to provide energy for skiing as you practically burn as much as you consume per day.

Evaluative comments in relation to Skiing:

In conclusion, I feel that my practice sessions before the ski trip greatly helped me in perfecting my technique of parallel turns as well as carving which benefitted me on the pistes where thick snow or thin ice was present.

As well as improving my technique I feel I have gained a much better understanding of safety procedures when skiing which have impacted upon my skiing. I feel I am a now more controlled and safe skier after implementing all of the FIS safety rules as well as planning group equipment in case of problems. A particular way in each the rules have impacted on me as that I now realise that as a higher ability I skier, I should always give way to those of a lower skiing ability who are below myself on the piste.

My assessment video features me applying some of the parallel turns I had practiced previously as well as demonstrating the safety procedure we followed in terms of all members of the group skiing in a single file line as to make sure no-one gets lost if they fall over.

CANDIDATE C

Outdoor and Adventurous: Kite Surfing

Physical Education

OCR Advanced Subsidiary GCE Unit G452
Log book cover sheet and authentication statement:
Outdoor and Adventurous Activities – Surfing

Centre Number		**Centre Name**	
Candidate Number		**Candidate Name**	

Log book element required	**Present? (please tick)**
Details and pictures of personal equipment and the reasons for taking it	
Explanation of quiver of boards and conditions suiting particular boards	
Identification of local breaks surfed, best times/conditions to surf	
Health and safety principles	
Details of the code of ethics relevant to the activity	
Details of nutritional planning	
Details of 15 surfs (dates, times, conditions, tides, selected board)	
Evaluative comments in relation to of each the 15 surfs undertaken for assessment	

Assessment Band Descriptor which log conforms to

Band 1: A detailed and comprehensive log containing all the prescribed information is present	
Band 2: A detailed log containing all the prescribed information is present	
Band 3: A detailed log containing most of the prescribed information is present	
Band 4: A log containing some of the prescribed information is present	
Band 5: A log containing little of the prescribed information is present	
Mark Awarded	

Authentication statement
I can confirm that this candidate has fully completed the activity as detailed in this log book, meeting all health and safety requirements, and that the material in this log book is the candidates own work.

Name of instructor/teacher responsible	

Signature		Date	

Weather conditions over assessment period

Date	Wind direction	Wind strength	Weather conditions
2-10-12	SW	15kts	cloudy
3-10-12	SSW	12kts	cloudy
4-10-12	SE	12Kts	cloudy
5-10-12	SW	15Kts	raining
6-10-12	WSW	6-8kts	sunny
7-10-12	SW	20kts	sunny
8-10-12	SW	8kts	cloudy

For my event I went to the Kiteracing world championships in Caligari. The format was set out in divisions. I was in the 'pink' womens fleet, results are enclosed.

These were the teo kiteracing areas:

Basis Equipment

Harness: many beginners like seat harness but for racing one is required because the pull is from a lower point.

Kite: larger race kite with more power are required for racing for example the North Dynos

Board: A specific race board is required in kite racing it has a larger area with a flat bottom meaning you are able to go fast on it.

Racing bar and lines: are also required with a longer depower and longer lines you are able to take better and work the kite more in light winds.

Safety inplications of kitesurfing

Kite Surfings minimum competence of skills are considered to be:

Level 1: Kite Flying Skills

1. Understand all aspects of safe handling of kites on land & water.
2. Able to launch and land (unaided) on a specified spot on land.

Level 2: Basic Water Skills

1. Body Surfing with kite along and back to shore.
2. Water launching onto board

Level 3: Basic Kite Surfing Skills

1. Getting on a board and travelling a distance under kite power.
2. Emergency stop on water – getting off the board quickly and stopping with the kite aloft.
3. Returning to base on land either by kitesurfing, paddling or body-surfing home.

General Safety Guidelines:

- Stay clear of power lines and overhead obstructions.
- Never fly a kite in a lightning storm.
- Always inform the Beach warden, Life Guard or Coast Guard of where and when you will be kitesurfing. (Kites crashing look like plans crashing to naïve spectators). Britain's beaches, airspace and ocean environment belong to everyone. Keep our beaches safe, clean and free.

Flying Skills

- If you can not walk backwards when the kite is flying directly overhead the kite is too big and/or the wind is too strong.
- Never tether yourself to the kite with a closed system. Only use open quick-release harness systems, if at all.
- Never kite surf if you do not have good Kite flying experience.

Land Skills

- Do not lay kite lines across any ones path.
- Do not launch or land in crowded areas.
- Always announce you are launching a kite.
- Select a safe launching site.
- Prevent kids from re-launching with sand (or other ballast) to weight it down.
- Disable unattended kites.

Water

- Never kite surf in congested areas with swimmers, boats or other craft or obstacles.
- Never go out on the water without telling another person where you are going.
- Always maintain a downwind safety buffer zone.
- A Kite surfer must know the rules of the sea including navigation laws and abide by them at all times.
- Instruction must be taken from an experienced kite surfer before surfing for the first time.
- A Kite surfer must know the rules of the sea including navigation laws and abide by them at all times.
- A kite surfer must be fit and healthy and over 18 years of age (under 18's should have parental permission and supervision).
- Never Kite surf without telling another person where you are going.
- If going offshore, kitesurf in pairs or with a rescue boat in attendance.
- Never Kite surf in conditions which are too extreme for either you or your equipment.

Equipment

- All manufacturers instructions and safety guidelines must be read and followed, in particular the limitations of the product.
- Equipment must be regularly checked for wear and tear and repaired accordingly before going out on the water.
- Always Kite surf with adequate safety equipment.

Rules and regulations and codes of ethics in kiteracing

Basic racing rules

1. Rider leaving beach has priority over rider coming back in. Accidents are more prone to happen on land than on water.
2. Rider on starboard tack (right hand forward) has priority over rider on port tack (left hand forward). The starboard tack rider does not have to modify his trajectory if faced with an oncoming rider.
3. A faster rider must keep clear of a slower rider.
4. An upwind kiter must keep his kite high of an oncoming downwind rider.
5. A downwind rider must keep his kite low to allow passage of an upwind rider.
6. A kiter rider/surfing a wave has priority over a kiter jumping the waves or coming in opposite direction

7. A kiter jumping must have a safe buffer zone around him (60Mts radius), especially downwind to avoid any possible collision with other riders.
8. Right of way is not an absolute right and will be of little use if any injury has been incurred.
9. Kite leashes are compulsory. No rider shall participate in any down winders or race unless he is equipped with a kite leash.
10. Know your limits and do not go beyond these, particularly when other riders are around you.
11. Any rider who wilfully directly or indirectly causes an accident will be eliminated from any further participation to this event.
12. Right of way must be given to any other user or watercraft.
13. The use of board leashes is not recommended

Codes of ethic

To launch and land other competitors kites and to not use foul language.

Kiteracing Nutrition

Carbohydrates are key in having enough energy to keep going through a session. After two to three hours you should come off the water and have something to eat.

It's a good idea to consume protein as well, because you need them to recover after your session or your workout. But for re-fuelling carbs are the important nutrient.

To get the fastest recovery after a session, you'll need to eat the right nutrients at the right time. Protein is great for this.

Good foods to fuel up	Good liquids to fuel up	Good foods to recover	Good liquids to recover
Juice	Chocolate milk(protein)	Bread, sandwich etc	Chocolate milk
Bread, sandwich etc	Protein shake (protein)	Rice with meat	Protein shake
Rice	Yoghurt drinks (protein)	Pasta with meat	Yoghurt drinks
Pasta	Juice		Juice (no protein)
	Energy/sport drinks		Energy/sport drinks (no protein)
	Soda		Soda (no protein)

Here is an example of my training diet:

Breakfast: Yogurt, bread (with ham) and a banana

Lunch: Sandwich with chicken and salad and olive oil dressing

Dinner: Pasta with salad, meat and olive oil

In between meals*: Fruit, juice, chocolate milk, yogurt drinks, protein shake, energy drinks.

It is also very important that I stay hydrated especially when training in hot conditions.

Evaluation of my kite racing

I believe I have very good kite control as I have been flying foil kites from a very young age. I also have very good knowledge of the water and I know when not to go out because of dangerous conditions. However when it comes to kiteracing skills there is still some improvement needed. I am now able to roll take which is what people like Jonnie Hynican are currently doing and winning the world championships on. However the consistency on my taking could use some improvement.

In relation to female kiteracing there is not very much between the top 10 racers and I believe with a bit more training I would be able to make the top ten in the Worlds in China 2013.

The following PDFs were included at the back of this logbook:

ENTRY_LIST_WOMEN from: http://www.kitecagliari.com/2012/risultati.php

Kite Worlds_Women FINAL from: http://www.kitecagliari.com/2012/risultati.php

Sailing Instructions from: http://www.kitecagliari.com/2012/downloader.php?params=Qxc8HZccQhchLiPemiH%2Bu%2F39Ebak5VXbV9XuycyxVO7%2F%2FBKq5bEDtEvK8qSK7juFkJJD5fK5DI4UjoCmpthW6v7%2BDvTxs3bvZuff%2BfmHZNo%3D

CANDIDATE D

Safe and Effective Exercise: Circuit Training

Physical Education

OCR Advanced Subsidiary GCE Unit G452

Log book cover sheet and authentication statement:

Safe and Effective Exercise Activities – Circuit Training

Centre Number		**Centre Name**	
Candidate Number		**Candidate Name**	

Please indicate below to which Outdoor and Adventurous Activity the log book and authentication statement relates.

Log book element required	**Present? (please tick)**
Time scale	
Goals of exercise programme	
Rationale for the design and implementation of programme	
Identification and detailed description of each exercise in programme	
Detailed description of personal warm up and cool down	
Health and safety implications for programme	
Record of implementation with evaluative comments; detail of progression	
Assessment and evaluation of goals	
Demonstration of awareness, understanding and application of principles of training in the design and/or implementation of programme with reference to: Specificity, Progression, Overload, Regression, Tedium, Adaptation	

Assessment Band Descriptor which log conforms to

Band 1: A comprehensive, detailed log book which records the candidate's participation in and understanding of safe and effective exercise activities is in evidence	
Band 2: An extensive, detailed log book which records the candidate's participation in and understanding of safe and effective exercise activities is in evidence	
Band 3: A detailed log book which records the candidate's participation in and understanding of safe and effective exercise activities is in evidence	
Band 4: A limited log book, which records the candidate's participation in and understanding of safe and effective exercise activities is in evidence	
Band 5: The log book provides little or no evidence of the candidate's participation in and understanding of safe and effective exercise activities	
Mark Awarded	

Authentication statement

I can confirm that this candidate has fully completed the activity as detailed in this log book, meeting all health and safety requirements, and that the material in this log book is the candidates own work.

Name of instructor/teacher responsible	

Signature		Date	

Safe and Effective Exercise

Introduction

Throughout my 12 week programme I aim to increase my muscle mass and muscle endurance which will in turn help to improve my general fitness and swimming. By completing my 12 week programme for both body weight and free weight, I hope to become faster in all 4 swimming strokes. I have designed both programmes by equally separating exercises for all parts of the body.

I will compete my targets by targeting specific muscle groups such as deltoids, pectoralis major, triceps brachii, rectus abdominals, external obliques, gluteus maximus, rectus femoris, gastrocnemius and many more. I will target these muscle groups by using many different weight machines and a range of different exercises.

Over my 12 week programme I aim to increase the demand put on my muscles gradually so I do not cause injury. I have chosen specific exercises for each programme which will benefit my swimming. For example, I increased the number of repetitions of the leg press over the 12 weeks. This will target my rectus femoris, biceps femoris and gluteus maximus and in turn give me more power in my legs. This will benefit my dive at the start of a swimming race and my turns at the wall.

Name:		**Fitness Professional/Teacher**	
Date	**Programme**	**Name**	**Signature**
31-1-13 (Th)	Free weight		
1-2-13 (F)	Body weight		
2-2-13 (S)	Free weight		
4-2-13 (M)	Body weight		
7-2-13 (Th)	Free weight		
8-2-13 (F)	Body weight		
9-2-13 (S)	Free weight		
11-2-13 (M)	Body weight		
14-2-13 (Th)	Free weight		
15-2-13 (F)	Body weight		
16-2-13 (S)	Free weight		
18-2-13 (M)	Body weight		
21-2-13 (Th)	Free weight		
22-2-13 (F)	Body weight		
23-2-13 (S)	Free weight		
25-2-13 (M)	Body weight		
26-2-13 (Th)	Free weight		
1-3-13 (F)	Body weight		
2-3-13 (S)	Free weight		
4-3-13 (M)	Body weight		
7-3-13 (Th)	Free weight		
8-3-13 (F)	Body weight		
9-3-13 (S)	Free weight		
11-3-13 (M)	Body weight		

Warm Up

A warm up helps to prepare the body for physical activity and helps to reduce your risk of injury and the aches and pains that come with exercise. This is because cold muscles do not absorb shock or impact as well, and are therefore

more susceptible to injury. One main reason to warm up prior to exercise is to assist your circulatory system in pumping oxygen-rich blood to all the working muscles. By completing a proper warm up, which helps to increase circulation throughout the body in a gradual manner, the body will be safely prepared for the increased demands of exercise.

Benefits of carrying a warm-up prior to exercise are:

- Prepares the body for activity – both physically and mentally
- The heating effect allows muscles and tendons to become more extensible. This makes stretching muscles and tendons easier and more effective. This can help to decrease the incidence of muscle strains.
- There is an increase in blood flow, which means there is an increase in oxygen to muscle tissue.
- There is increase in the temperature of the blood, which changes the partial pressure of blood gases. This means that more oxygen leaves the blood and enters the muscle tissue.
- The increase in temperature causes a rise in enzyme and metabolic activity. This improves the efficiency of muscle contraction.
- Mentally focused to begin activity.

A complete and professional warm-up should be split into 3 sections, the general warm-up, stretches and then sport specific activity.

It is very important that you perform a general warm-up before you stretch. You should not begin stretching before you muscles are warmed up as it will increase the chances of injury. A general warm up is split into two sections; joint rotations and aerobic activity. You should begin with joint rotations, starting with your toes working your way up the body. This facilitates joint motion by lubricating the entire joint with synovial fluid. This allows your joints to function more easily when called upon to participate in your athletic activity. You should perform slow circular movements until the joint seems to move more smoothly.

After you have completed joint rotations for the whole body you should do at least 5 minutes of aerobic activity such as jogging. This will help to raise your core body temperature and get your blood flowing all around your body. It will increase the blood flow in the muscles which will improve performance and flexibility, which in turn reduces the likelihood of injury.

Once you have completed the general warm-up you should then begin stretching. The stretching phase of the warm up should consist of both static and dynamic stretching. Make sure that static stretches are performed before any dynamic stretches when warming up to help reduce the risk of injury. This is because dynamic stretching can often result in overstretching which damages the muscles. Once you have completed a general warm-up, the muscles will be warmer and therefore more elastic. You should then begin some static stretches starting with your back, followed by your upper body and lower body.

Once you have completed static stretches you should then begin doing some light dynamic stretches such as leg raises and arm swings in all directions.

To complete your warm-up you should finish by doing a sport specific activity. This is where you perform skills which you will be performing during your athletic activity but at a reduced intensity. This is beneficial to the performer as it improves coordination, balance, strength, response time and may reduce the risk of injury.

Warm Up

General Warm Up

1 – Joint Rotations

Body Part

Toes

Ankles

Knees

Legs

Hips

Waist/Trunk

2 – Aerobic Activity

Jogging

Stretches

1 – Static Stretches

Back

Sides – External Obliques

Neck

Forearms and wrists

Triceps

Chest

Buttocks

Groin – adductors

Thighs – Quadriceps and abductors

Calves

Shins

Hamstrings

Instep

2 – Dynamic Stretches

Leg Raises

Arm Swings

Stretches Specific to Activity – Weight training or Cardiovascular

Exercises – Body Weight Programme

Press Ups

Kneel on the floor and set your hands at a distance that is slightly wider than shoulder-width apart. Do the same with your feet. Generally, the wider you place your feet the more stable you will be whilst performing the press up. Look slightly ahead of you, not straight down. This will help to keep your body in a straight line. Make sure your elbows have a slight bend and not fully locked out to reduce pressure to your shoulder and elbow joints.

1. Steadily lower yourself until your elbows are at a 90 degree angle or smaller whilst keeping a strong core.
2. When you are at the lowest you can go while keeping your body in a straight line, begin to push yourself back up to the original staring position.

Dynamic Lunges

Stand upright and keep your upper body straight. Keep your shoulders back and relaxed, ensuring you look straight ahead of you.

Take a large step forward with your right leg and rest your hands on your front thigh. This will help you to stay balanced.

Lower your hips until both your knees are roughly at a 90 degree angle. Make sure that your front knee is directly above your ankle and not going over your toe.

Do not let the knee closest to the floor touch the floor.

Push back up to the staring position by keeping the weight in your heels.

Tricep Dips

Level: Intermediate

Position your hands shoulder width apart on a secured bench or stable chair. Move your bum in front of the bench with your legs bent and your feet placed about hip width apart on the floor.

Straighten your arms and keep a slight bend in your elbows in order to always keep tension on your triceps and off your elbow joints. This will help to prevent injury.

Slowly bend at your elbows and lower your upper body down towards the floor until your arms are at about a 90 degree angle. Make sure your back stays close to the bench. Inhale through the movement.

Once you reach the bottom of the movement, raise your body by pressing and straightening your elbows until your arms are fully extended. Exhale throughout this movement. Repeat this as many times as desired.

To increase the intensity of this exercise, straighten your legs.

Standing Calf Raises

Level: Beginner

Stand slightly away from a wall with your feet hip-width apart and toes facing forwards. Place your hands on the wall in front of you shoulder width apart for balance and support.

Exhale and slowly raise up onto your toes, lifting your heels off the floor. Keep your knees straight and do not allow your feet to rotate. Hold this raised position briefly.

Inhale and slowly begin to lower you heels back onto the floor.

Repeat.

To include variation to this exercise, you could do single- leg calf raises by completing the steps above, only using one leg at a time.

Abdominal Crunches

Level: Beginner

Lie down on the ground and bend the knees to a 45 degree angle.

Place your feet roughly hip distance apart.

Cross your arms over your chest.

Inhale and in a smooth, controlled motion bring your torso up until your arms connect with your upper thighs.

Slowly lower your torso back down until it is just short of the floor, exhaling throughout the movement.

Repeat.

Squats – Dumbbell

Level: Intermediate

Stand upright with a straight back and with a dumbbell in each hand.

Ensure your feet are aligned parallel to one another pointing slightly outward and shoulder-width apart.

Slightly arch your back and look forward keeping your eyes fixed on an object in front of you.

Inhale fully and squat downward by slowly sitting until your thighs are horizontal to the floor.

Push with your legs until you are in the initial upright position. Exhale and repeat.

Sit Ups

Level: Beginner

Lie down on the ground and bend your knees to a 45 degree angle.

Cross your arms over your chest.

Inhale and in a smooth and controlled motion bring the torso up until the arms connect with the upper thighs.

Slowly begin to lower the torso back down until it is just short of the floor.

Repeat.

Leg Lifts

Level: Beginner

Lie on your back with your legs fully extended.

Place your arms above your head or off to the side for extra stability.

Slowly raise your legs up whilst keeping them straight until they are nearly perpendicular to the ground, exhaling throughout the movement.

Slowly begin to lower your legs back down, whilst inhaling.

Note: Do not allow your legs to touch the floor at the bottom of the movement.

Hold the lowered position for around 2-3 seconds then repeat.

Common problem: Arching of the back

Twisted Sit Ups

Level: Beginner

Lie down on the ground with your back flat.

Bend your knees to a 45 degree angle and position your feet hip distance apart.

Place your fingers behind your ears

In a smooth and controlled motion, lift your torso up while twisting at the waist until your elbow opposite your knee connects.

Slowly begin to lower your torso back down whilst twisting back to the starting position.

Repeat for other side.

Exercises – Free Weight Programme

Bench Press – Dumbbell

Set a bench to a flat position.

Sit and hold a dumbbell in each hand.

Slowly lie back onto the bench whilst keeping your back flat and raise the dumbbells above you so they are above your chest.

Slowly lower the dumbbells downward by bending at your elbows until your arms are parallel with the ground, whilst inhaling.

Press the dumbbells upward until they nearly meet at the top, above your chest.

Repeat.

Lunges – Dumbbell

Level: Beginner

Stand upright and keep your upper body straight holding dumbbells at your sides. Keep your shoulders back and relaxed, ensuring you look straight ahead of you.

Take a large step forward with your right leg and rest your hands on your front thigh. This will help you to stay balanced.

Lower your hips until both of your knees are roughly at a 90 degree angle. Make sure that your front knee is directly above your ankle and not going over your toe.

Do not let the knee closest to the floor touch the floor.

Push back up to the starting position by keeping the weight in your heels.

Biceps Curl

Level: Beginner

Stand or sit on a bench with your arms at your sides.

Hold a dumbbell with your palm facing inward.

With one arm at a time, curl the weight upward by rotating the forearm so that the palm is facing outward before the forearm is horizontal. Make sure you exhale.

Begin to inhale and slowly lower the weight back down.

Repeat for as many sets as desired then change arms and repeat.

Inclined Sit Ups

Level: Beginner

Anchor your feet to the machine and slowly lie down to the starting position.

Make sure that you keep a slight bend in your knees.

Cross your arms over your chest.

Inhale and slowly lift your torso up until it is at least perpendicular to the ground.

Slowly lower your torso back down to the decline bench whilst exhaling.

Repeat.

Angled Leg Press

Adjust the footplate so that when seated, your legs are significantly bent when your feet are placed on the footplate.

Sit on the seat and ensure that your back is flat against the backrest of the machine and your feet are positioned hip-width apart on the footplate.

Begin to press with the legs, then using the handle release the safely bar. You are now in the starting position.

Slowly lower the weight so that your thighs touch or nearly touch your torso, whilst inhaling.

Press the weight back up to the original starting position whilst exhaling.

Repeat.

Squats – Dumbbell

Level: Intermediate

Stand upright with a straight back with a dumbbell in each hand.

Ensure your feet are aligned parallel to one another pointing slightly outward and shoulder-width apart.

Slightly arch your back and look forward keeping your eyes fixed on an object in front of you.

Inhale fully and squat downward by slowly sitting until your thighs are horizontal to the floor.

Push with your legs until you are in the initial upright position. Exhale and repeat.

Calf Raises – Dumbbell

Level: Beginner

Stand upright with a dumbbell in each hand.

Stand slightly away from a wall with your feet hip-width apart and toes facing forwards. Place your hands on the wall in front of you shoulder width apart for balance and support.

Exhale and slowly raise up onto your toes, lifting your heels off the floor. Keep your knees straight and do not allow your feet to rotate. Hold this raised position briefly.

Inhale and slowly begin to lower you heels back onto the floor.

Repeat

To include variation to this exercise, you could do single- leg calf raises by completing the steps above, only using one leg at a time.

Lateral Pull down

Face the machine, sit and position your thighs under the pads. Grip the bar with a wide overhand grip and inhale.

Whilst inhaling, pull the bar down until it is in line with your chest, keeping your body upright. Your elbows should be kept close to your body and pointing towards the sides and not forward.

Slowly lower the weight to the starting position, letting your arms fully extend without letting the elbow joint to slam as the arms are straightened

Repeat.

Abdominal Crunches

Level: Beginner

Lie down on the ground and bend the knees to a 45 degree angle.

Place your feet roughly hip distance apart.

Cross your arms over your chest.

Inhale and in a smooth, controlled motion bring your torso up until your arms connect with your upper thighs.

Slowly lower your torso back down until it is just short of the floor, exhaling throughout the movement.

Repeat.

Body Weight Programme

I am going to design a body weight programme which will bring about physiological adaptation to strength and speed. My programme will last for a minimum of 6 months and will include 10 different exercises.

Goals:

In order to plan my programme I had to find out my maximum repetitions for each exercise, whilst maintaining form, consistency and control.

Below is a table showing my rep maximums :

Exercise	Duration	Amount
Press ups	30 Seconds	22
Dynamic Lunges	30 Seconds	18
Planche	2 Mins	----------
Triceps Dips	30 Seconds	26
Standing Calf Raises	30 Seconds	33
Abdominal Crunches	30 Seconds	20
Squats	30 Seconds	25
Sit Ups	30 Seconds	23
Leg Lifts	30 Seconds	23
Twisted Sit ups	30 Seconds	16

After finding out my maximum repetitions for each exercise, I was then able to plan my 12 sessions. To work out how many repetitions and sets I was going to complete, each session whilst including the principles of training (Specificity, Progression, Overload and Tedium), I took my rep maximum for each individual exercise and halved it. This gave me the

start number for my first session. (eg. My rep maximum for press ups was 22. Therefore my first session I was going to complete 11 press ups). I then worked out what 10% was and decided to increase my repetitions by 10% each session. (e.g Session 2 I will complete 13 press ups).

Session 1

Warm Up (Pulse Raiser)

Machine/Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise	Sets / Duration	Repetitions
Press Ups	2	6
Dynamic Lunges	2	6
Planche	2 mins	
Triceps Dips	2	8
Standing Calf Raises	2	9
Abdominal Crunches	2	6
Squats	2	7
Sit Ups	2	7
Leg Lifts	2	7
Twisted Sit Ups	2	5

Session 2

Warm Up (Pulse Raiser)

Machine/ Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise	Sets / Duration	Repetitions
Press Ups	2	7
Dynamic Lunges	2	7
Planche	2 mins	
Triceps Dips	2	9
Standing Calf Raises	2	10
Abdominal Crunches	2	7
Squats	2	8
Sit Ups	2	8
Leg Lifts	2	8
Twisted Sit Ups	2	6

Session 3

Warm Up (Pulse Raiser)

Machine/ Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise	Sets / Duration	Repetitions
Press Ups	2	8
Dynamic Lunges	2	8
Planche	2 mins	
Triceps Dips	2	10
Standing Calf Raises	2	11
Abdominal Crunches	2	8
Squats	2	9
Sit Ups	2	9
Leg Lifts	2	9
Twisted Sit Ups	2	7

Session 4

Warm Up (Pulse Raiser)

Machine/ Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise	Sets / Duration	Repetitions
Press Ups	2	9
Dynamic Lunges	2	9
Planche	2 mins	
Triceps Dips	2	11
Standing Calf Raises	2	12
Abdominal Crunches	2	9
Squats	2	10
Sit Ups	2	10
Leg Lifts	2	10
Twisted Sit Ups	2	7

Session 5

Warm Up (Pulse Raiser)

Machine/ Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise	Sets / Duration	Repetitions
Press Ups	2	10
Dynamic Lunges	2	10
Planche	2 mins	
Triceps Dips	2	12
Standing Calf Raises	2	13
Abdominal Crunches	2	10
Squats	2	11
Sit Ups	2	11
Leg Lifts	2	11
Twisted Sit Ups	2	8

Session 6

Warm Up (Pulse Raiser)

Machine/ Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise Sets / Duration Repetitions

Exercise	Sets / Duration	Repetitions
Press Ups	2	11
Dynamic Lunges	2	11
Planche	2 mins	
Triceps Dips	2	13
Standing Calf Raises	2	14
Abdominal Crunches	2	11
Squats	2	12
Sit Ups	2	12
Leg Lifts	2	12
Twisted Sit Ups	2	9

Session 7

Warm Up (Pulse Raiser)

Machine/ Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise	Sets / Duration	Repetitions
Press Ups	2	12
Dynamic Lunges	2	12
Planche	2 mins	
Triceps Dips	2	14
Standing Calf Raises	2	15
Abdominal Crunches	2	12
Squats	2	13
Sit Ups	2	13
Leg Lifts	2	13
Twisted Sit Ups	2	10

Session 8

Warm Up (Pulse Raiser)

Machine/ Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise	Sets / Duration	Repetitions
Press Ups	2	13
Dynamic Lunges	2	13
Planche	2 mins	
Triceps Dips	2	15
Standing Calf Raises	2	16
Abdominal Crunches	2	13
Squats	2	14
Sit Ups	2	14
Leg Lifts	2	14
Twisted Sit Ups	2	11

Session 9

Warm Up (Pulse Raiser)

Machine/ Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise	Sets / Duration	Repetitions
Press Ups	2	14
Dynamic Lunges	2	14
Planche	2 mins	
Triceps Dips	2	16
Standing Calf Raises	2	17
Abdominal Crunches	2	14
Squats	2	15
Sit Ups	2	15
Leg Lifts	2	15
Twisted Sit Ups	2	12

Session 10

Warm Up (Pulse Raiser)

Machine/ Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise	Sets / Duration	Repetitions
Press Ups	2	15
Dynamic Lunges	2	15
Planche	2 mins	
Triceps Dips	2	17
Standing Calf Raises	2	18
Abdominal Crunches	2	15
Squats	2	16
Sit Ups	2	16
Leg Lifts	2	16
Twisted Sit Ups	2	13

Session 11

Warm Up (Pulse Raiser)

Machine/ Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise	Sets / Duration	Repetitions
Press Ups	2	16
Dynamic Lunges	2	16
Planche	2 mins	
Triceps Dips	2	18
Standing Calf Raises	2	19
Abdominal Crunches	2	16
Squats	2	17
Sit Ups	2	17
Leg Lifts	2	17
Twisted Sit Ups	2	14

Session 12

Warm Up (Pulse Raiser)

Machine/ Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise	Sets / Duration	Repetitions
Press Ups	2	17
Dynamic Lunges	2	17
Planche	2 mins	
Triceps Dips	2	19
Standing Calf Raises	2	20
Abdominal Crunches	2	17
Squats	2	18
Sit Ups	2	18
Leg Lifts	2	18
Twisted Sit Ups	2	15

Free Weights and Resistance Machines Programme

I am going to design a free weights and resistance machine programme which will bring about physiological adaptation to strength and speed. My programme will last for a minimum of 6 months and will include 10 different exercises.

In order to plan my program I had to find out my maximum repetitions for each exercise, whilst maintaining form, consistency and control.

Below is a table showing my rep maximums.

Exercise	Weight	Duration	Amount
Bench press	10 kg	30 Seconds	16
Lunges- dumbbell	10 kg (5kg each arm)	30 Seconds	16
Biceps Curl	5kg	30 Seconds	12
Inclined Sit Ups	-	30 Seconds	20
Leg Press	75 Kg	30 Seconds	18
Squats	10kg	30 Seconds	20
Calf Raises	10kg	30 Seconds	32
Lateral Pulldown	Setting 6	30 Seconds	16
Total Abdominal Crunches	-	30 Seconds	24
Cable Rows	Setting 6	30 Seconds	16

Session 1

Warm Up (Pulse Raiser)

Machine / Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise/Lift	Machine/ Equipment	Sets/Duration	Repetitions	Weight
Bench Press	Dumbbell	2	4	10kg
Lunges	Dumbbell	2	4	10kg (5kg each arm)
Biceps Curl	Dumbbell	2	3	5kg
Inclined Sit Ups		2	5	-
Leg Press		2	5	75kg
Squats	Dumbbell	2	5	10kg
Calf Raises	Dumbbell	2	8	10kg
Lateral Pull-down		2	4	Setting 6
Abdominal Crunches		2	6	-
Cable Rows		2	4	Setting 6

Session 2

Warm Up (Pulse Raiser)

Machine / Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise/Lift	Machine/ Equipment	Sets / Duration	Repetitions	Weight
Bench Press	Dumbbell	2	5	10kg
Lunges	Dumbbell	2	5	10kg (5kg each arm)
Biceps Curl	Dumbbell	2	4	5kg
Inclined Sit Ups		2	6	-
Leg Press		2	6	75kg
Squats	Dumbbell	2	6	10kg
Calf Raises	Dumbbell	2	9	10kg
Lateral Pull-down		2	5	Setting 6
Abdominal Crunches		2	7	-
Cable Rows		2	6	Setting 6

Session 3

Warm Up (Pulse Raiser)

Machine / Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise/Lift	Machine/ Equipment	Sets / Duration	Repetitions	Weight
Bench Press	Dumbbell	2	6	10kg
Lunges	Dumbbell	2	6	10kg (5kg each arm)
Biceps Curl	Dumbbell	2	5	5kg
Inclined Sit Ups		2	7	-
Leg Press		2	7	75kg
Squats	Dumbbell	2	7	10kg
Calf Raises	Dumbbell	2	10	10kg
Lateral Pull-down		2	6	Setting 6
Abdominal Crunches		2	8	-
Cable Rows		2	7	Setting 6

Session 4

Warm Up (Pulse Raiser)

Machine / Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise/Lift	Machine/ Equipment	Sets / Duration	Repetitions	Weight
Bench Press	Dumbbell	2	7	10kg
Lunges	Dumbbell	2	7	10kg (5kg each arm)
Biceps Curl	Dumbbell	2	6	5kg
Inclined Sit Ups		2	8	-
Leg Press		2	8	75kg
Squats	Dumbbell	2	8	10kg
Calf Raises	Dumbbell	2	11	10kg
Lateral Pull-down		2	7	Setting 6
Abdominal Crunches		2	8	-
Cable Rows		2	9	Setting 6

Session 5

Warm Up (Pulse Raiser)

Machine / Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise/Lift	Machine/ Equipment	Sets / Duration	Repetitions	Weight
Bench Press	Dumbbell	2	8	10kg
Lunges	Dumbbell	2	8	10kg (5kg each arm)
Biceps Curl	Dumbbell	2	7	5kg
Inclined Sit Ups		2	9	-
Leg Press		2	9	75kg
Squats	Dumbbell	2	9	10kg
Calf Raises	Dumbbell	2	12	10kg
Lateral Pull-down		2	8	Setting 6
Abdominal Crunches		2	10	-
Cable Rows		2	9	Setting 6

Session 6

Warm Up (Pulse Raiser)

Machine / Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise/Lift	Machine/ Equipment	Sets / Duration	Repetitions	Weight
Bench Press	Dumbbell	2	9	12.5kg
Lunges	Dumbbell	2	9	12kg (6kg each arm)
Biceps Curl	Dumbbell	2	8	5kg
Inclined Sit Ups		2	10	-
Leg Press		2	10	100kg
Squats	Dumbbell	2	10	12kg
Calf Raises	Dumbbell	2	13	12kg
Lateral Pull-down		2	9	Setting 7
Abdominal Crunches		2	11	-
Cable Rows		2	10	Setting 7

Session 7

Warm Up (Pulse Raiser)

Machine / Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise/Lift	Machine/ Equipment	Sets / Duration	Repetitions	Weight
Bench Press	Dumbbell	2	10	12.5kg
Lunges	Dumbbell	2	10	12kg (6kg each arm)
Biceps Curl	Dumbbell	2	9	5kg
Inclined Sit Ups		2	11	-
Leg Press		2	11	100kg
Squats	Dumbbell	2	11	12kg
Calf Raises	Dumbbell	2	14	12kg
Lateral Pull-down		2	10	Setting 7
Abdominal Crunches		2	12	-
Cable Rows		2	11	Setting 7

Session 8

Warm Up (Pulse Raiser)

Machine / Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise/Lift	Machine/ Equipment	Sets / Duration	Repetitions	Weight
Bench Press	Dumbbell	2	11	12.5kg
Lunges	Dumbbell	2	11	12kg (6kg each arm)
Biceps Curl	Dumbbell	2	10	5kg
Inclined Sit Ups		2	12	-
Leg Press		2	12	100kg
Squats	Dumbbell	2	12	12kg
Calf Raises	Dumbbell	2	15	12kg
Lateral Pull-down		2	11	Setting 7
Abdominal Crunches		2	13	-
Cable Rows		2	12	Setting 7

Session 9

Warm Up (Pulse Raiser)

Machine / Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise/Lift	Machine/ Equipment	Sets / Duration	Repetitions	Weight
Bench Press	Dumbbell	2	12	12.5kg
Lunges	Dumbbell	2	12	12kg (6kg each arm)
Biceps Curl	Dumbbell	2	11	5kg
Inclined Sit Ups		2	13	-
Leg Press		2	13	100kg
Squats	Dumbbell	2	13	12kg
Calf Raises	Dumbbell	2	15	12kg
Lateral Pull-down		2	12	Setting 7
Abdominal Crunches		2	14	-
Cable Rows		2	13	Setting 7

Session 10

Warm Up (Pulse Raiser)

Machine / Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise/Lift	Machine/ Equipment	Sets / Duration	Repetitions	Weight
Bench Press	Dumbbell	2	13	12.5kg
Lunges	Dumbbell	2	13	12kg (6kg each arm)
Biceps Curl	Dumbbell	2	12	5kg
Inclined Sit Ups		2	14	-
Leg Press		2	14	100kg
Squats	Dumbbell	2	14	12kg
Calf Raises	Dumbbell	2	16	12kg
Lateral Pull-down		2	13	Setting 7
Abdominal Crunches		2	15	-
Cable Rows		2	14	Setting 7

Session 11

Warm Up (Pulse Raiser)

Machine / Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise/Lift	Machine/ Equipment	Sets / Duration	Repetitions	Weight
Bench Press	Dumbbell	2	14	12.5kg
Lunges	Dumbbell	2	14	12kg (6kg each arm)
Biceps Curl	Dumbbell	2	13	5kg
Inclined Sit Ups		2	15	-
Leg Press		2	15	100kg
Squats	Dumbbell	2	15	12kg
Calf Raises	Dumbbell	2	17	12kg
Lateral Pull-down		2	14	Setting 7
Abdominal Crunches		2	16	-
Cable Rows		2	15	Setting 7

Session 12

Warm Up (Pulse Raiser)

Machine / Equipment	Duration
Rowing Machine	5 Minutes
Exercise Bike	3 Minutes

Exercise/Lift	Machine/ Equipment	Sets / Duration	Repetitions	Weight
Bench Press	Dumbbell	2	15	12.5kg
Lunges	Dumbbell	2	15	12kg (6kg each arm)
Biceps Curl	Dumbbell	2	14	5kg
Inclined Sit Ups		2	16	-
Leg Press		2	16	100kg
Squats	Dumbbell	2	16	12kg
Calf Raises	Dumbbell	2	18	12kg
Lateral Pull-down		2	15	Setting 7
Abdominal Crunches		2	17	-
Cable Rows		2	16	Setting 7

Evaluations

Session 1 – Free Weight (31-1-13)

For session 1 of my free weight programme I used the results from my maximum repetitions test to calculate how many sets and repetitions I needed to do for each exercise. I used these results to find out what 5-% of my rep. maximum would be. This amount would then be my starting point for my first session. I then used these results to calculate what 10% of my repetition maximum would be so I could increase my repetitions each week by this amount. To begin my session I completed a sufficient warm up where I started by going joint rotations. I then went on to doing 5 minutes on the rowing machine and a further 3 minutes on the exercise bike. By doing this I ensured that I had raised my pulse and that my body was fully warmed up. I then did some static and dynamic stretches, followed by stretches which were specific to the parts of the body I was going to be using in the session. I then completed 2 sets of the following exercises: 4 bench press at 10kg, 4 lunges at 10kg (5kg each arm), 3 bicep curls at 5kg, 5 inclined sit ups, 5 leg presses at 75kg, 5 squats at 10kg, 8 calf raises at 10kg, 4 lateral pull-downs on setting 6, 6 total abdominal crunches and 4 cable rows on setting 6. To begin with each exercise took longer than I expected as I was new to the gym and sometimes I had to wait to use some machines or equipment. However, after I had completed half of my exercises I got through my remaining exercises much faster whilst maintaining good form, consistency and control. I finished my session with good time remaining so I was able to complete a full cool down.

Session 1 – Body Weight (1-12-13)

For session 1 of my body weight programme I used my results from my maximum repetitions test to calculate how many sets and repetitions I needed to do for each exercise. I used these results to find out what 50% of my rep. maximum would be. This amount would then be my starting point for my first week. I then used these results to calculate what 10% of my repetition maximum would be so I could increase my repetitions each week by this amount. To begin my session I completed a sufficient warm up where I started doing joint rotations. I then went on to doing 5 minutes on the rowing machine and further 3 minutes on the exercise bike. By doing this I ensured that I had raised my pulse and that my body was fully warmed up. I then did some static and dynamic stretches, followed by stretches which were specific to the parts of the body I was going to be using in that session. I then completed 2 sets of the following exercises: 6 press ups, 6 dynamic lunges, planche for 2 minutes, 8 tricep dips, 9 standing calf raises, 6

abdominal crunches, 7 squats, 7 sit ups, 7 lying leg lifts and 5 twisted sit ups. To begin with each exercise took longer than I expected as I was new to the gym and sometimes I had to wait to use some machines or equipment. However, after I had completed half of my exercises I got through my remaining exercises much faster whilst maintain good form consistency and control. I finished my session with good time remaining so I was able to complete a full cool down. During my cool down I started by going some static stretches, focussing primarily on my arms and legs. This is because I could feel some pain in my triceps and deltoids from the press ups and tricep dips and my rectus femoris and gluteus maximus from squats. My cool down helped to reduce muscle fatigue and soreness from a build-up of lactic acid in my muscles and helped to return my body back to its resting state. This will benefit me as it allows me to perform my best in my next session.

Session 2 – Free Weight (2-2-13)

For session 2 of my free weight programme I increased the total number of repetitions by 10% from my starting number. I found this session much more difficult than my previous one. I found that my deltoids and biceps branchii fatigued much more quickly than I expected. This resulted in me being unable to complete my second repetition of the bench press or lateral pull-down. Instead I did an extra set of leg press and abdominal crunches as they have very little impact on my deltoids or biceps branchii. This helped me to reduce my chances of injury as I was unable to continue with good form, consistency and control. This would of benefited me as it allowed me to rest mf deltoids so by my next session, I would of hopefully recovered.

Session 2 – Body Weight (4-2-13)

For my session 2 of my body weight programme I warmed up on the rowing machine for 5 minutes, followed by the exercise bike for 3 minutes. This helped to raise my pulse, core and muscle temperature. I was able to complete all 10 exercises with time remaining to cool down. However, out of the 10 exercises I completed 2 of them didn't go to plan. On the second set of standing calf raises, I was only able to complete 5 repetitions. This is because I fatigued much quicker than I expected. My gastrocnemius was aching more much than expected due to the accumulation of lactic acid in the muscles which I was unable to remove efficiently. My second exercise which didn't go to plan was the lying leg lifts. This is because my recuts abdominals were aching much more than expected as I had just completed abdominal crunches and sit-ups beforehand. This therefore overloaded my rectus abdominals causing an accumulation of lactic acid which I was unable to remove before carrying out the lying leg lifts. This resulted in me only completing 4 repetitions in the second set, rather than 7.

Session 3 – Free Weight (7-2-13)

For session 3 of my free weight programme everything felt much easier than my previous session. My muscles did not fatigue very fast which meant that I was able to complete my session much faster whilst keeping good form, control and consistency. The only exercise which I found more difficult than others was the calf raises. My gastrocnemius was accumulated with lactic acid which resulted in my being unable to complete all of my second set. Instead of completing seven repetitions I was only able to complete 4. At the end of my session I was unable to complete a full warm down due to lack of time. This resulted in my muscles aching slightly the next few days.

Session 3 – Body Weight (8-2-13)

For session 3 of my body weight programme, I warmed up by doing joint rotations and 5 minutes on the rowing machine followed by 3 minutes on the exercise bike. I then did some static and dynamic stretches which prepared my body for exercise. I then began my session which was very successful. I was able to complete all of my exercises with some time left over at the end of my session to warm down. My muscles didn't fatigue as quickly as they did in my previous session meaning I was able to complete it. This may be because I was able to do a full warm down at the end of my last session meaning my muscles wouldn't of had as much lactic acid or other waste products in them. Also, at the end of my session I ate some chicken and pasta to restore all the nutrients which I had used. Chicken is high in protein which would have helped to rebuild my muscles and recover much faster.

Session 4 – Free Weight (9-2-13)

For session 4 of my free weight programme I was able to complete my session with very few problems. I was able to complete all 8 out of 10 exercises whilst keeping good form, control and consistency. I was not able to complete my

second set of the leg press at 75kg. This was due to a build-up of lactic acid and other waste products in my rectus femoris and gluteus maximus. This may of also been down to my swimming session the previous day where we completed a hard kick set. I may not have done a sufficient warm down at the end of the session in order to remove all of the lactic acid. The second exercise I was unable to complete was cable rows. This is because the machine was being used and I ran out of time at the end of my session as I started late. After the session I consumed a protein shake which would have significantly aided my muscle recovery for my next session.

Session 4 – Body Weight (11-2-13)

For session 4 of my body weight programme I did not come across any pro0blems which stopped me from completing my whole session. The gym was very quiet which meant that all the equipment which I wanted to use was available and I did not have to wait. This meant that I was able to complete my session much faster whilst keeping good form, control and consistency and have plenty of time to do a full and sufficient warm down. This benefited my body as a whole as it removed any lactic acid in my muscles. This benefited my swimming session in the evening as it meant that I was able to put as much effort in as I could without my muscles fatiguing too much.

Session 5 – Free Weight (14-2-13)

For my session 5 of my free weight programme I had a few problems which resulted in me being unable to complete all the exercises I had planned. The gym was very busy which meant that the machines were not always free. For the majority of the machines I had planned to use I had wait quite a long time, so I ended up missing out some exercises. I was unable to complete the bench press, leg press and cable rows due to lack of availability. However, instead I completed an extra set of lunges, inclined sit up and calf raises so I didn't miss out or waste time. At the end of the session I just had enough time to complete a light cool down followed by some light stretches which helped to remove any lactic acid or any other waste products from my muscles. After the session I consumed a protein shake which helped my muscles to cover for my next session.

Session 5 – Body Weight (15-2-13)

For session 5 of my body weight programme I did not come across many problems. I was able to complete all of the exercises I had planned whilst keeping good form, consistency and control. My only problem was holding the planche and abdominal crunches. This was because my recuts abdominals were aching due to a build-up of lactic acid, resulting in a burning sensation. However, the rest of my exercises all went as planned and I was able to complete my session with enough time at the end for a complete warm down.

Session 6 – Free Weight (16-2-13)

For session 6 of my free weight programme everything went extremely well. This was my best session so far as I was able to complete all of my exercises whilst keeping good form, control and consistency. I felt very little fatigue or muscle soreness whilst completing my exercises. I had plenty of time left over at the end of my session as I did not have to wait for a machine. After my session I drank 1 litre of water to replace any lost water and ate some chicken and pasta. I also went swimming which helped to loosen off any sore or tight muscles and remove any lactic acid in my muscles.

Session 6 – Body Weight (18-2-13)

For session 6 of my body weight programme everything went as planned. Just like my free weight session, this was my best body weight session so far. The gym was very quiet resulting in more room to carry out body weight exercises. The previous evening I had a swimming session where I was able to stretch and loosen any muscles which were right or sore. This benefited my body weight session as it meant that my muscles were loose and did not fatigue very much. My only ache I came across was my deltoids and infraspinatus. However, this was from an on-going problem from overuse in swimming and not from any of my exercises in the gym. After my session I consumed some chicken with a litre of water and replenish any nutrients used.

Session 7 – Free Weight (21-2-13)

For session 7 of my free weight programme I did not come across any problems. I arrived at the gym slightly earlier than normal which meant that I did not have to rush if I had to wait for any machines or equipment. The gym wasn't too busy which meant that I did not have to wait too long to use the machines. Whilst completing the inclined sit-ups

I could feel a burning sensation in my rectus abdominals. The following day, my rectus abdominals and latissimus dorsi were aching. However, I do not think this was down to using incorrect form, control or consistency. Instead, I think it was down to an overload on my rectus abdominals causing a build-up of lactic acid and other waste products which I was unable to sufficiently remove. At the end of my session I completed a complete warm down where I focussed on light stretches, especially on my latissimus dorsi and rectus remoris.

Session 7 – Body Weight (22-2-13)

For session 7 of my body weight programme the majority of my exercises went well. My tricep dips were my best exercise this session as I did not fatigue very quickly meaning I was able to complete all of the repetitions. My planche also went well as I extended the time I held it by an extra 45 seconds. This was because I felt I was able to hold it longer than I initially expected. I was unable to complete all of the twisted sit ups as I could feel a burning sensation in my rectus abdominals. Therefore, instead of completing 2 sets of 10 repetitions, I completed 1 set of 10 reps followed by 1 set of 4 reps. After my session I completed a full warm down where I did various stretches to remove any lactic acid in my muscles.

Session 8 – Free Weight (23-2-13)

For session 8 of my free weight programme I was able to complete my whole session but had to change it slightly. The gym was very busy meaning I had to wait quite a while for some machines for equipment to become free. However, I overcame this problem by extending the length of my session by and hour, meaning I was able to complete all of my planned exercises without having to miss any out or rush them. During this session I found that the leg press was my best exercise. This was because I was able to complete all of my sets without experiencing much pain in my recuts femoris, gluteus maximus or biceps femoris. As I allowed an extra hour onto my session, I was able to complete a full warm down. This benefited my body as it meant that I could sufficiently remove any lactic acid or other waste products from my muscles.

Session 8 – Body Weight (25-2-13)

For session 8 of my body weight programme I did not come across any problems at all throughout the session. I was able to complete the majority of the exercises without fatiguing too quicjly. I got through my session reasonably quickly as the gym was very quiet meaning I did not have to wait for an area or piece of equipment to be free. At the end of my session I completed a full warm down and then went swimming. This allowed me to stretch any muscles which were still tight and remove any lactic acid which had remained in my muscles. After my swimming session I ate chicken pasta which helped to replace any nutrients I had lost.

Session 9 – Free Weight (28-2-13)

For session 9 of my free weight programme I did not experience any problems completing any of the exercises. I found this was my best free weight session yet as all my exercises went as planned, without any waiting around for machines or equipment. My best exercise was the bench press as I was able to slightly increase the weight up to 15kg. At the end of my session I consumed a protein shake which helped to rebuild my muscles for my next session.

Session 9 – Body Weight (1-3-13)

For session 9 of my body weight programme 3 out of my 10 exercises did not go as planned. My gastrocnemius, rectus femoris, biceps femoris and gluteus maximus fatigued extremely quickly due to an accumulation of lactic acid. This therefore meant that I was unable to complete all of my planned repetitions on the dynamic lunges, standing calf raises and squats. I was able to complete my first set of each of these 3 exercises; however I could not complete the second set. Instead I did an extra set of press ups, sits ups and lying leg lifts. This meant that I was working completely different muscles groups meaning I did not injure myself by trying to complete my planned session. This was because I could not complete my second set of my planned exercises whilst keeping good form, consistency and control.

Session 10 – Free Weight (2-3-13)

For session 10 of my free weight programme I had to slightly alter my session. Just like in session 6 of my body weight programme, my deltoids and infraspinatus were sore again. To reduce the chances of injury I slightly altered my session so instead of doing bench press, biceps curl, and lateral pull-down, I did an extra set of lunges, inclined sit ups, angled

leg press and calf raises. This meant that I was working completely different muscle groups so I did not create an injury. At the end of the session I completed so upper body stretches to loosen off my trapezius, deltoids and infraspinatus. I also used a foam roller which helped to relax my muscles by activating the sensory receptors connecting my muscle fibres to my tendons. It also helped to increase my blood circulation, which in turn speeds up recovery and boosts performance. After using the foam roller I completed some static stretches which helped my muscles to return to the proper length and recover even faster.

Session 10 – Body Weight (4-3-13)

This session was very similar to session 8 of my body weight programme. Again, the gym was very quiet meaning I was able to get through my session quite quickly without being interrupted or having to wait. My best exercise was the press ups. This was because I was able to complete both sets without having to stop part way through my repetitions. I felt very little pain in my deltoids or pectoralis major. At the end of my session I consumed chicken pasta and a banana which helped replace any lost nutrients and vitamins.

Session 11 – Free Weight (7-3-13)

For session 11 of my free weight programme I was able to complete my whole session without any problems. My best exercise was the inclined sit up where I was able to increase my repetitions by 5, resulting in 40 sit ups in total. This was my highest amount so far. I had a slight problem with the calf raises as I felt a strong burning sensation in my gastrocnemius. However, I was able to push on through the pain and complete all the sets and repetitions planned. At the end of the session I completed a full warm down which benefited my swimming session which I had in the evening.

Session 11 – Body Weight (8-3-13)

For session 11 of my body weight programme I was able to complete the session as planned. My best exercise this session was my lying leg lifts as my rectus abdominals didn't fatigue as quickly as expected. This meant that I was able to complete an extra set of leg lifts which helped me overload my rectus abdominals. At the end of the decision I used a foam roller to help remove any lactic acid and relax my muscles. This aided my recovery as it increased my blood circulation all around the body.

Session 12 – Free Weight (9-3-13)

Session 12 of my free weight programme was my hardest yet. I was unable to complete all of the exercises which I had planned due to a lack of time. I had to miss out the lateral pull-down and cable rows as the machines were in use and I had ran out of time. However, I found that the leg press was my best exercise this session as I was able to complete all sets without stopping for a break. Even though I felt pain in my rectus femoris and biceps femoris, I carried on and completed the session. At the end of my session I consumed a protein shake to help rebuild muscle.

Session 12 – Body Weight (11-3-13)

Session 12 of my body weight programme was my best overall. I found this session one of my toughest yet, however I still pushed on through my pain barrier to complete the session. As it was my final session I aimed to complete every exercise as planned, even if I experienced pain in my muscles. I found that my tricep dips were my best exercise this session as I was able to ignore the pain in my triceps brachii, unlike in previous sessions, and complete the whole set. At the end of my session I completed a full warm down and used a foam roller. This helped to relax my muscles by activating the sensory receptors connecting my muscle fibres to my tendons. It also helped to increase my blood circulation, which in turn speeds up recovery and boosts performance. After using the foam roller I completed some static stretches which helped my muscles to return to the proper length and recover even faster.

In order for me to see if I had achieved my goals which I set before I started my 12 week training programme, I carried out another repetition maximum test at the end of the 12 weeks. The results I got from this test will show me if I have achieved my goals and whether my fitness programme worked or not. The results are shown below:

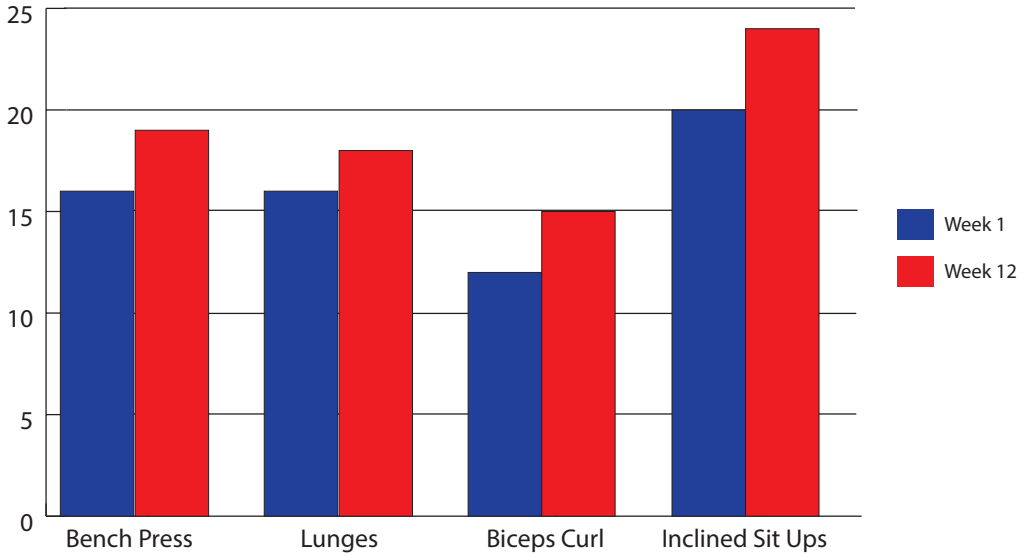
Body Weight Repetition Maximum Test:

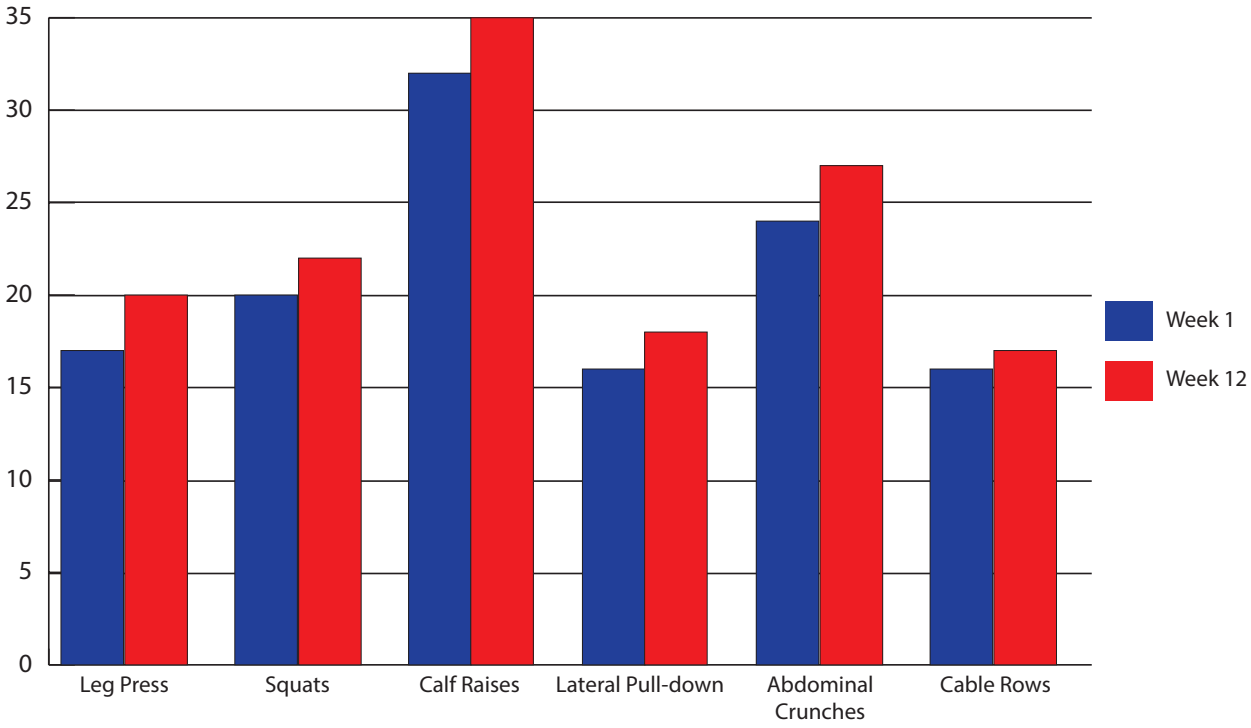
Exercise	Duration	Amount
Press ups	30 Seconds	25
Dynamic Lunges	30 Seconds	22
Planche	3 Mins 20 Seconds	----------
Triceps Dips	30 Seconds	29
Standing Calf Raises	30 Seconds	37
Abdominal Crunches	30 Seconds	24
Squats	30 Seconds	28
Sit Ups	30 Seconds	27
Leg Lifts	30 Seconds	25
Twisted Sit ups	30 Seconds	18

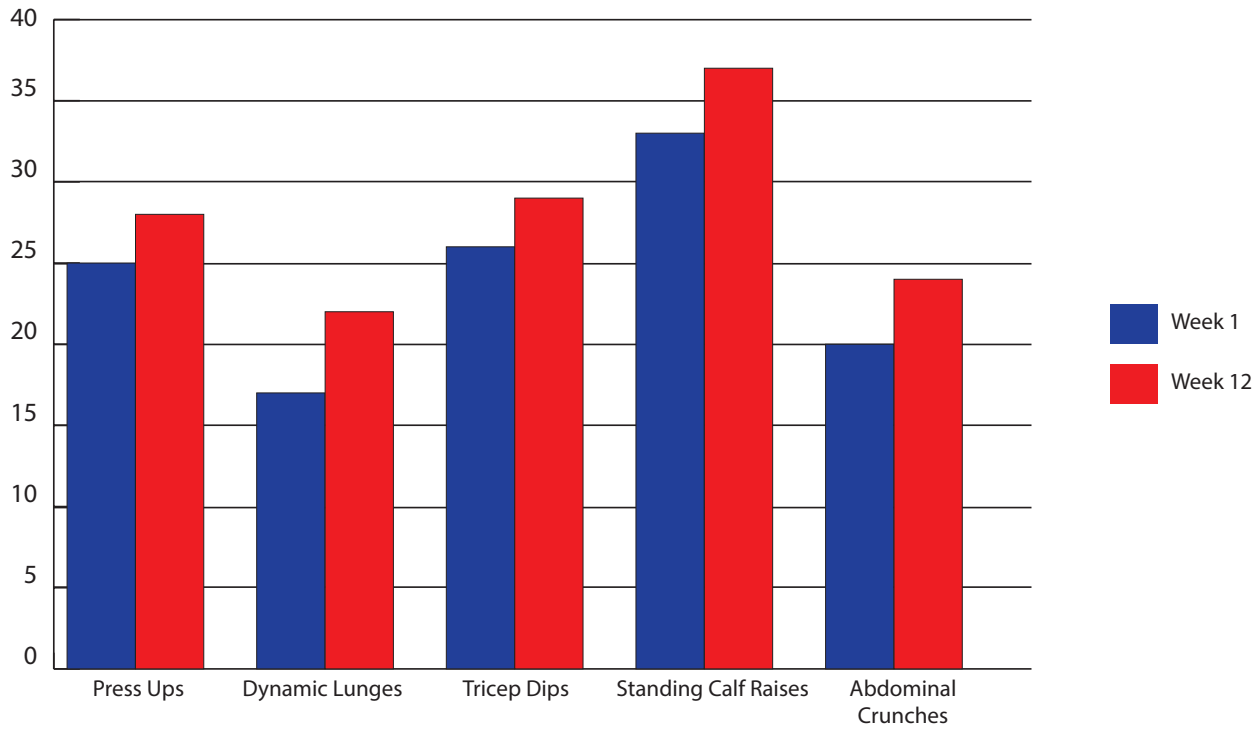
Free Weight Repetition Maximum Test

Exercise	Weight	Duration	Amount
Bench Press	10kg	30 Seconds	19
Lunges-dumbbell	10 kg (5kg each arm)	30 Seconds	18
Biceps Curl	5kg	30 Seconds	15
Inclined Sit Ups	-	30 Seconds	24
Leg Press	75 kg	30 Seconds	20
Sqauts	10kg	30 Seconds	22
Calf Raises	10kg	30 Seconds	35
Laterial Pull-down	Setting 6	30 Seconds	18
Total Abdominal Crunches	-	30 Seconds	27
Cable Rows	Setting 6	30 Seconds	17

Repetitions maximum test for body weight programme (week 1 to 12)



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35
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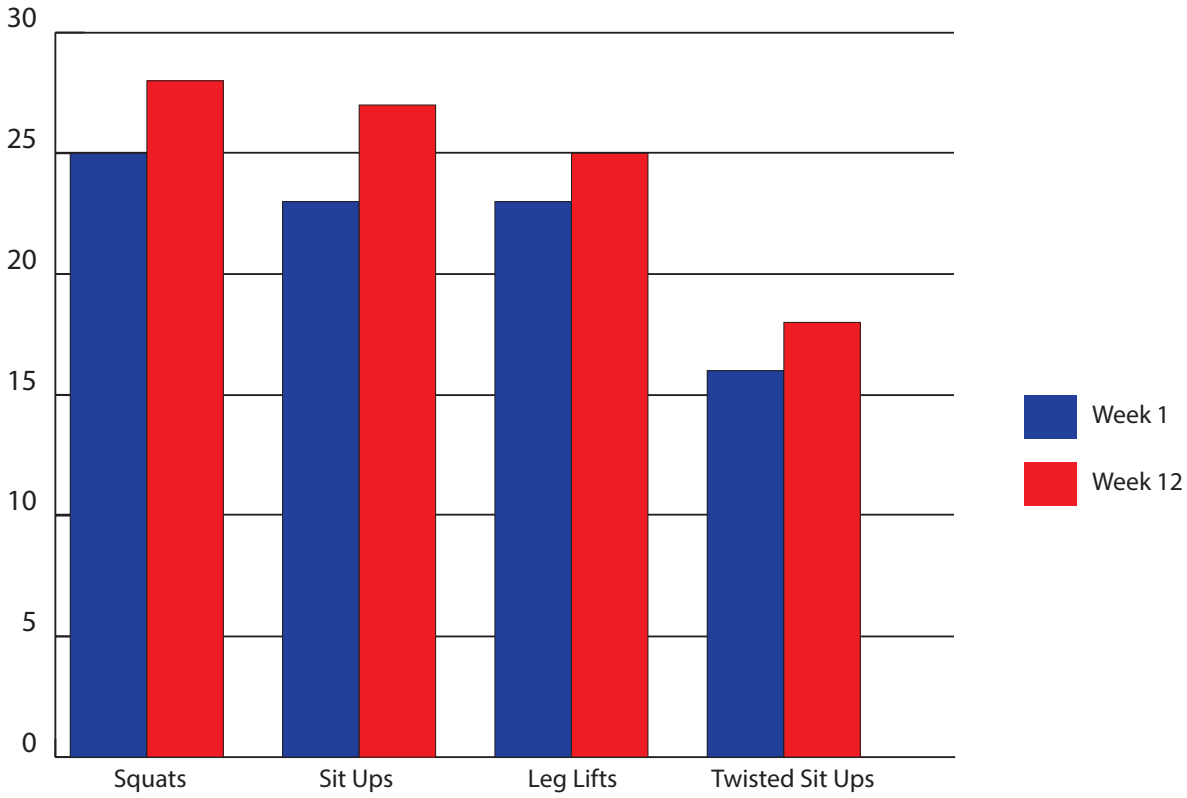
Press Ups
Dynamic Lunges
Tricep Dips
Standing Calf Raises
Abdominal Crunches
Week 1
Week 12


30
25
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Squats
Sit Ups
Leg Lifts
Twisted Sit Ups
Week 1
Week 12

Conclusion

In order to see if I have achieved my initial goals from my exercise programme, I repeated my maximum repetitions rest at the end of my programme and compared it with my first week. I then put these results in a bar chart which easily compares my results from week 1 to week 12. From my results from week 12 you can clearly see that I have improved. I have noticed significant results in my swimming as I now have a much more powerful dive start and turns. I have also noticed that I now have much better upper body strength meaning I am able to move much faster and more efficiently through the water. After my 12 week programme I competed in a swimming competition where I saw my personal best times significantly reduce.

CANDIDATE E

Outdoor and Adventurous: Skiing

Physical Education

OCR Advanced Subsidiary GCE Unit G452
Log book cover sheet and authentication statement:
Outdoor and Adventurous Activities – Skiing, Snowboarding

Centre Number		**Centre Name**	
Candidate Number		**Candidate Name**	

Please indicate below to which Outdoor and Adventurous Activity the log book and authentication statement relates.

Log book element required	**Present? (please tick)**
Details of the course/slope undertaken for the assessment	
Details of personal equipment and the reasons for taking it	
Details of group equipment and the reasons for taking it	
Discussion relating to safety principles applied	
Details of the code of ethics relevant to the activity	
Details of nutritional planning	
Evaluative comments in relation to the course/slope undertaken for assessment	

Assessment Band Descriptor which log conforms to

Band 1: A detailed and comprehensive log containing all the prescribed information is present	
Band 2: A detailed log containing all the prescribed information is present	
Band 3: A detailed log containing most of the prescribed information is present	
Band 4: A log containing some of the prescribed information is present	
Band 5: A log containing little of the prescribed information is present	
Mark Awarded	

Authentication statement
I can confirm that this candidate has fully completed the activity as detailed in this log book, meeting all health and safety requirements, and that the material in this log book is the candidates own work.

Name of instructor/teacher responsible	

Signature		Date	

This year I stayed in Lech, Austria. This allowed me to explore two regions : Lech/Zuers, St.Christoph/St.Anton

Day 1 – 1st April 2013

- White ring – This is a full race track which starts in Lech and goes through Zuers back to Lech, that took me about 3 hours.
- (Steinmaennle(Red), Schuettboden-Zuers(Blue),Hexenboden Direkte(Red), Linherabfahrt(Red), Rinderhuette(ski route/black), Madloch-Zug(Ski route/black)
- Lunch
- Kriegeralpe(blue)
- Furka-Steinmaehder(blue)
- Speed Sulzen (red)
- Hasensprung(blue)
- Schlegelkopf-Rudalpe-Lech(red)

Day 2 – 2nd April 2013

- 34(red)

Practical assessment day videoing (34(red))

- Gliding snow plough
- Snowplough turns
- Basic swing turns
- Parallel turns
- Skid to halt
- Step turns
- Free run
- Lunch
- Furkamaehder (red)
- Steinmahder (red)
- Zugertobel (ski route/black)
- 34 (red/ends black)
- Grubenalpe-Oberlech (blue)

Assessment

The video was filmed at the 2nd of April. The assessment took place on the 34 (red). I choose this run because it was good prepared and not so busy in the morning. The vision was very good and it was not too cold because the sun was shining.

Equipment

The right Equipment is very important for the safety on the run.

- Skis – After the ski retailer measured my height, body weight and my ability, he gave me the Bogner Slalom Skis, because I'm a sportive driver and I like to carve. He then fitted the attachment of the skis to my skiboots and to my height, body mass and ability.
- Boots – I had special skiboots which were fitted to my height, body mass and ablity. Skiboots allow me to flex slightly to have an optimum control over the ski.

- Poles – My Poles were fitted on my height.
- Ski jacket – Protecting myself infront of wind and water
- Ski trousers – Protecting myself infront of wind and water
- Thermal inner layers – Warming my body
- Goggles – My goggles had a high UV protection and they were polarised. Beside that, my goggles were protecting my eyes infront of wind.
- Helmet – A Helmet is very important to wear if you are skiing, because it is protecting my head if you fall and you have a slight speed on. It is decreasing the risk of injury dramatically.

Safety

- **Safety requires the knowledge of the own equipment and the pistes. I need to be sure about the weather conditions. In higher areas the weather can change really qui9ckly (snow, rain, clouds), if that happens it is really important that I would stop my run off to make sure no accident will happen to me. So what's really important is that I always read the piste information. These weather reports are on the first lifts up to the pistes. I made sure that I understand all the symbols and warning. Doesn't matter where I am I need to know which is the easiest and fastest way back home. If signs are saying that I can't ski that route because of bad conditions I need to respect that and find another way. I took pain killers with me and rescue drops because it's very usual to get a headache or feel sick in high altitudes. I also had enough water so if I had the feeling I'm not feeling well I can drink something and therefore solve the problem. In fact of a avalanche I took a "pipser" with me which is showing exactly where I am as it's connected with the rescue station. I also always had a phone with me just to make sure I can call someone when I loose my friends on the piste or just don't see them.**

Code of Ethics

The International Ski Federation (FIS) has ten safety rules:

1. Skiers must not endager others
2. Speed must be adapted to personal ability and conditions
3. Skiers in front have the right of way
4. Overtaking is allowed, providing that there is enough space
5. When entering a marked run, skiers must check uphill first
6. Skiers must not stop in narrow space or if visibility is restricted
7. Skiers on foot must keep to the side
8. Skiers must respect all posted signs and markings
9. Skiers are duty bound to assist at accidents

In an accident, skiers must exchange names and addresses. Any person who is involved in or witnesses an accident, whether responsible or not must swap names and addresses

Nutrition

Skiing is a sport that takes place in very cold and therefore hard conditions, this means the body needs more energy to keep the body warm and therefore it needs more calories and proteins.

I also needed to drink well as the body needs a lot of water.

This means I need a good breakfast, a good breakfast contained bread, egg, cheese, fruit, tea and water for me.

This would be enough energy for the whole morning till my lunch.

I always had hot water with me so if I'm too cold I could drink something to get my body heat back. For lunch

I always had a full meal which often contained pasta or something with potatoes with that I always had about 1L water or something different to drink. I never had something really big in the evening as I was tired from the day and therefore mostly had a small portion of soup followed by pasta with a salad and a lot of water, this was really important because this helps my body to recover.

CANDIDATE F

Safe and Effective Exercise: Circuit Training

Physical Education

OCR Advanced Subsidiary GCE Unit G452
Log book cover sheet and authentication statement:
Safe and Effective Exercise Activities – Circuit Training

Centre Number		**Centre Name**	
Candidate Number		**Candidate Name**	

Please indicate below to which Outdoor and Adventurous Activity the log book and authentication statement relates.

Log book element required	**Present? (please tick)**
Time scale	
Goals of exercise programme	
Rationale for the design and implementation of programme	
Identification and detailed description of each exercise in programme	
Detailed description of personal warm up and cool down	
Health and safety implications for programme	
Record of implementation with evaluative comments; detail of progression	
Assessment and evaluation of goals	
Demonstration of awareness, understanding and application of principles of training in the design and/or implementation of programme with reference to: Specificity, Progression, Overload, Regression, Tedium, Adaptation	

Assessment Band Descriptor which log conforms to

Band 1: A comprehensive, detailed log book which records the candidate's participation in and understanding of safe and effective exercise activities is in evidence	
Band 2: An extensive, detailed log book which records the candidate's participation in and understanding of safe and effective exercise activities is in evidence	
Band 3: A detailed log book which records the candidate's participation in and understanding of safe and effective exercise activities is in evidence	
Band 4: A limited log book, which records the candidate's participation in and understanding of safe and effective exercise activities is in evidence	
Band 5: The log book provides little or no evidence of the candidate's participation in and understanding of safe and effective exercise activities	

Authentication statement
I can confirm that this candidate has fully completed the activity as detailed in this log book, meeting all health and safety requirements, and that the material in this log book is the candidates own work.

Name of instructor/teacher responsible	

Signature		Date	

Log book

Contents

Short and long term goals

My circuit training program is going to be based on a 13 week plan to improve my muscular strength and endurance. I will be concentrating on two separate circuits one is body weight circuit and the other is resistant machines and free weights circuit. The body weight circuit will work on my muscular endurance where as the restraint machine and free weight circuit we work on my muscular strength. This training program is designed to help me in my chosen sport of rugby. The strength training will help me in scums, rucks and tackling. The endurance training will happen me play the full game at a high intensity throughout.

Short term goals

These are goals that I hope to achieve at the end of each individual training section. This training program maybe for improving my health, but I indented to enjoy the training and it can be used as a way to forget about school and relief any stress.

- To relieve stress and forget about school and any worries.
- To belief that by doing this training program I am improving my health

Long term goals

The long term goal are what the program is working towards.

- Muscular strength to improve and help my ability when I am in a scrum, ruck, making a run or tackling. If I improve my muscular strength my runs will be more powerful and I will be able to drive stronger meaning I will be able to gain more ground.
- If I improve my muscular endurance I will be able to play a full game to the best of my ability at a high intensity. This means as the game progress I will still be able to make big tackles and strong runs.

Smart training

Specific

This is more specific to my personal sport with is rugby. I would like to increase my muscle mass in my upper body for tackling and rucking. I would also like to have a more powerful drive so I would also work on my legs.

Measurable

I will complete test throughout the training programme to see if the training plan is working

Agreed

I am pleased with the training program. The circuits are focused on the specific muscle groups that I intended to improve and develop, if I fill that the training is not working then I will make siren changes, such as increasing the intensity or changing the program completely.

Realistic

I have produced figures that I hope to achieve by the end of the program. These figures may change depending on injury or over factors. I hope my achieving these goals I will improve on the areas that I specified.

Time Related

The training program is 13 weeks long within that time I would have hoped to have completed all my goals set. The program should help me throughout the rugby scenes and I can judge if the program is helping or not on my performance in games.

Enjoyable

There would be two different types of circuits that can be change and developed to keep the program interesting.

Recordable

The test I will do throughout the 13 week program I will record so that I will be able to the see the progress I have made from do the training program.

Principles of training

I have used the principles throughout the training program

Specificity

The training that I will do is going to be specific to my chosen sport, which is rugby, so there for the exercises in my training program will be specific to my sport and will develop muscle groups that will benefit me in my sport. I will make my training specific so that I can achieve my goals. An exam of one of my goals is to improve muscle strength in my legs so I would perform specific exercises such as squats with heavy weights with smaller amount of repetitions. When performing strength exercises I will use weights that are suitable for my body completion with a suitable amount of repetitions. If I was to work on endurance then I work use smaller weights with more repetitions. When performing endurance exercises I will use a weight that will improve my muscle endurance that is not too light that I will not benefit from it.

Progression

I already take part in regular exercise but have never tracked my progress so in the 6 week program I will try to increase muscle mass and muscle strength. I will gradually increase the intensity of the training program. By doing this it will create an overload that will cause progression. Through the training program I will not know how much I will progress so I will have to adapted the training programme to soot the areas where I have not reached my goals or where I have beaten my target goals. So that I progress and improve in my chosen areas I will make specific changes

- I will increase the number of reps. This will increase my muscle endurances
- I would also increase the weight. This would help my muscle strength progress. In the body weight program I would change my body position this would make the exercise harder. E.g. instead of doing a normal press up, do elevated ones instead. If I'm doing the resistance circuit I would just increase the weight.
- I would also decrease the time between the exercises as the program increase the recovery time of the muscle should decrease.
- Each separate exercise will have its own progress. The exercise will progress as the performer starts to find the exercise less challenging or the state of the progression is no longer effective. An example would be press up;

  When performing these acts will remain the same throughout the progression; they will put their hands on the floor at shoulders with apart and when lowering their body they will keep the same angle each repetition.

1. The first stage the perform starts on their knees and their hands on the floor and then they raise their upper body.
2. The second stage the performer lays flat with their hands on the floor and then raisers their whole body.
3. The third stage would be to place their feet on a chair then their hands on the floor and raise their whole body.

Each stage of the progression the exercise is getting harder so the performer will improve more effectively than if they just repeated the first stage.

Overload

Overloading is a type of train that's puts stress on the body and puts it under a greater demand. This allows fitness to increase and develop. By doing this type of training it will focus the body to adapt which will allow the performer to work more intensely for longer. Overload training is broken down into four sections.

1. **Frequency** this is about the amount of exercise that I do. So if I relate this to my circuit training I could increase the number of times I repeat the circuit. I could also increase the number of reps of each exercise or I could add another exercise to the circuit. All of these changes would help me reach one of my long term goals of muscles endurance.
2. **Intensity** This is increasing the difficulty of an exercise or a movement. If I relate this to my weight training program then I would increase the weight that I'm lifting. This also relates back to the progression and the example of increasing the difficulty of the press up
3. **Time** This increases the amount of time that I am exercising. If I was doing an exercise for 30 seconds next time I could do it for 45 seconds. I could also change the amount of time that I have to rest. If I increased the frequency of my exercise I would also increases the amount of time as I would be performing more exercises.
4. **Type** This is changing the exercise and performing it in a way that makes it more difficult. An example would be if performing crunches I could change the type by using a medicine ball and performing the crunches on that instead.

I will start my training program by repeating the circuit twice. The throughout my training program I will increase the number of times I repeat the circuits by 1 at the end of the week. This will create an overload and cores by body work at a high intensity. At the beginning of the next mouth I will lower the number of times I repeat the circuit. This is so that my body can recover and it will decrease the change of injury. I will then start to overload again by repeating what I did in the first mouth by adding more repetitions to the circuit.

Reversibility

Reversibility happens when you stop training or decrease the intensity of training. It doesn't take long for this to start to happen in some case it can start after a week of no training. If training intensity is lowered this can cause muscle atrophy which will result in loss of strength in the muscles. This most often occurs if a performer picks up an injury. If I sustain an injury then I will adapt my training program so that instead of improving my strength or endurance I will bring it back to my original level of fitness.

Tedium

I have to different training circuits one is free weights and resistant's mechanises and the other is a body weight circuit. I will try and make both of them as different as possible as I want the performer to be motivated throughout the training program and they cannot do this if it's boring. I have created and range of different circuits that I can perform that

gradually get hard and more intense this will create an overload and will help with progression. If the performer gets bored they will lose interest and could cause reversibility.

[Extract from OCR Teacher Support Coursework Guidance Booklet]

Safe and Effective Exercise Activities – Generic criteria

Performance

The candidate is assessed in:

- The performance of a range of basic and advanced skills
- The selection and application of skills and strategies
- The understanding and application of rules/health and safety implications

The assessment should take place in conditioned competitive situations where tasks of appropriate pitch and challenge enable candidates to demonstrate their ability in these areas and be placed in a rank order in terms of ability.

The level of success of their basic and advanced skills will be based on the following movement phases together with those appropriate to the activity:

- Form
- Consistency
- Control

The level of success in appropriate strategic awareness will be based on:

- Specificity
- Progression
- Overload
- Regression
- Tedium
- Adaptation

These assessment phases are used in conjunction with the following assessment criteria for the tasks of appropriate pitch and challenge in authentic contexts.

Band 1 (25-30)

- The candidate demonstrates a very high level of acquired and developed skills that show a consistently high standard of accuracy, control and fluency under performance pressure.
- There is consistent successful selection and application of a wide range of advanced techniques which, under performance pressure, maintain their accuracy, fluency and control.
- A wide range of appropriate strategies and tactics are successfully and consistently used by the candidate demonstrating an excellent understanding of the perceptual requirements of the activity.
- The overall standard in the performance situation is excellent and indicative of high levels of learning and understanding.
- The candidate demonstrates excellent physical and mental fitness.
- The candidate demonstrates an excellent understanding and application of the rules/regulations/conventions of the activity.
- A comprehensive, detailed log book which records the candidate's participation in and understanding of safe and effective exercise activities is in evidence.

Band 2 (19-24)

- The candidate demonstrates a high level of acquired and developed skills that show a consistently high standard of accuracy, control and fluency under competitive pressure.

- There is consistent successful selection and application of a range of advanced techniques which, under competitive pressure maintain their accuracy, fluency and control.
- A range of appropriate strategies and tactics are successfully and consistently used by the candidate demonstrating a good understanding of the perceptual requirements of the activity.
- The overall performance in the competitive situation is very good and indicative of good levels of learning and understanding.
- The candidate demonstrates good physical and mental fitness.
- The candidate demonstrates a good understanding and application of the rules/regulations of the activity.
- An extensive, detailed log book which records the candidate's participation in and understanding of safe and effective exercise activities is in evidence.

Band 3 (13-18)

- The candidate demonstrates a sound level of acquired and developed skills that show a consistently good standard of accuracy, control and fluency under competitive pressure.
- There is successful selection and application of a range of advanced techniques which, under competitive pressure maintain their accuracy, fluency and control.
- A limited range of appropriate strategies and tactics are successfully used by the candidate demonstrating a sound understanding of the perceptual requirements of the activity.
- The overall performance in the competitive situation is good and indicative of sound levels of learning and understanding.
- The candidate demonstrates sound physical and mental fitness.
- The candidate demonstrates a sound understanding and application of the rules/regulations of the activity.
- An extensive, detailed log book which records the candidate's participation in and understanding of safe and effective exercise activities is in evidence.

Band 4 (7-12)

- The candidate demonstrates a limited level of acquired and developed skills that show some accuracy, control and fluency under competitive pressure.
- There is successful selection and application of advanced techniques which, under competitive pressure usually maintain some accuracy, fluency and control.
- Some appropriate strategies and tactics are successfully used by the candidate demonstrating a limited understanding of the perceptual requirements of the activity.
- The overall performance in the competitive situation is limited, inconsistent and indicative of limited learning and understanding.
- The candidate demonstrates limited physical and mental fitness.
- The candidate demonstrates limited understanding and application of the rules/regulations/conventions of the activity.
- A limited log book, which records the candidate's participation in and understanding of safe and effective exercise activities is in evidence.

Band 5 (0-6)

- The candidate demonstrates a poor level of acquired and developed skills that show little accuracy, control and fluency under performance pressure.
- There is an attempt to select and apply advanced techniques which, under performance pressure, maintain little accuracy, fluency and control.
- Appropriate strategies and tactics are rarely used by the candidate demonstrating a poor understanding of the perceptual requirements of the activity.
- The overall standard in the performance situation is poor, inconsistent and indicative of limited learning and understanding.

- The candidate demonstrates inadequate levels of physical and mental fitness.
- The candidate demonstrates little understanding and application of the rules/regulations/conventions of the activity.
- The log book provides little or no evidence of the candidate's participation in and understanding of safe and effective exercise activities.

1. Circuit Training

The focus of the tasks will be the completion of **two** different exercise programmes:

1. The personal implementation of the prescribed body weight exercise training programme.
2. The design and implementation of either:
   i) a free weights exercise programme specific to the needs of the candidate;
   ii) a cardiovascular equipment exercise programme specific to the needs of the candidate.

Each of the two exercise programmes must be implemented for a minimum of 12 weeks.

1. Prescribed body weight exercise programme

The personal implementation of the prescribed body weight exercise training programme should follow the exercises as given, but should be tailored to the needs of the individual candidate taking consideration of frequency of sessions, number of repetitions, number of sets and rest intervals. How these meet the needs of the individual candidate should be justified in the log book kept.

The prescribed body weight exercise programme will consist of the following ten exercises:

Upper body

- Press ups
- Pull ups
- Triceps dips

Core

- Sit ups
- Twisted sit ups
- Back extension

Lower body

- Dynamic lunges
- Squats
- Side lying leg lifts
- Standing calf raises

Candidates may incorporate the use of free weights into the prescribed body weight exercise programme. How this meets the needs of the individual candidate should be justified in the log book kept.

2 (i) Free weights and resistance machines

A resistance training programme should include a **minimum of two exercises from each** of the upper body, core and lower body areas and must consist of a minimum of ten exercises in total:

Upper body

- Bench press/dumb-bell flies
- Overhead dumb-bell press/ lateral dumb-bell raises

- Seated rows/ upright rows
- Lateral pull down/ pec-deck flies
- Bent over rows/ dead lift
- Biceps curl
- Tricep press/tricep kick back/overhead tricep extension

Core

- Inclined sit ups
- Lateral pulley extensions
- Total abdominal crunches

Where the centre does not have access to specific resistance machine they may substitute a suitable alternative exercise for that aspect of the exercise programme provided that a detailed description of this is included in the log.

Lower body

- Leg press
- Leg curls
- Leg extensions
- Barbell/ dumb-bell squats
- One leg bench squats
- Standing/seated calf raises
- Heel raises
- Standing cable pull

2 (ii) Cardiovascular equipment

A cardiovascular equipment exercise programme should include a **minimum of two different pieces of equipment for each** of the upper body, core and lower body areas and must include a minimum of six exercises in total.

Upper body

- Rower
- Cross trainer
- Vertical climber

Core

- Rower
- Stepper
- Vertical climber

Where the centre does not have access to specific cardiovascular equipment they may substitute a suitable alternative piece of equipment for that aspect of the exercise programme provided that a detailed description of this is included in the log.

Lower body

- Static bike
- Treadmill
- Rower
- Stepper
- Cross trainer
- Stairmaster

Log books

For **each** exercise programme a programme a detailed log should be kept which includes:

- Time scale – a minimum of 12 weeks for each programme
- The goals of each personal exercise programme
  - muscle groups, muscle fibres, energy systems targeted
  - specific, measurable goals which are evaluated during and on completion of the programme
- A rationale for the design and implementation of each programme
  - number and frequency of sessions determined
  - number of sets, repetitions, rest intervals, weights determined
  - how progression is implemented and measured
- Identification and detailed description of each exercise involved
- Detailed description of personal warm up and cool down
- Health and safety implications for each programme
- Record of implementation of each programme with evaluative comments; detail of progression should be present
- Assessment and evaluation of goals
- Authentication statement from a qualified instructor (this may be the PE teacher)

The depth and detail of coverage of the above elements in the log book should demonstrate the candidates' awareness, understanding and application of principles of training in the design and/or implementation of their exercise programmes, including:

- Specificity
- Progression
- Overload
- Regression
- Tedium
- Adaptation

[End of OCR Extract]

Personal warm up and cool down

The warm up is performed before taking part in exercise. A warm up involves some light exercise this rates heart rate, some stretching to stop muscles cramping and exercises that loosens joints. All these small exercises are aerobic exercises.

It is important to warm up as it will allow you to perform more efficiently as your muscle temperature will have increased, which will help the strength and speed of the muscles as they contract. One of the most important reasons to warm up is that it can prevent injury.

A warm up helps get u ready to perform. When you warm up you get your heart rate going faster and increase your stroke volume. As the blood flow increases it will cause the muscle temperature to increase. The muscles will become more flexible because of the temperature; this means that the muscle will have greater contraction strength. As the temperature increases the blood viscosity decreases this improves blood flow. The warm up also allows the muscles to because oxygenated and also improves the rate of which we take in and remove oxygen and carbon dioxide.

The warm up decreases the chance of injury as a temperature of muscles have increases they are more flexible and have the oxygen they need. The warm up gets the muscles working slowly increasing the percentage of the muscle being used. When the performer start to perform the sport or exercise they will already have a high percentage of muscles fibres being used is high. This means when they are performing the exercise there isn't a small group of fibres taking all the strain, this helps prevent injury.

Personal warm up

I will use my warm up to get in to my optimum working rate. The warm up needs to increase my heart rate and stroke volume. This is so I increases my cardiac output into my optimum working zone. This is between 60-80%.

Both of my circuits take place in the gym. This will help me when it comes to warming up as I can use the large number of equipment that to the gym has. An example would be the cross trainer this could be used as a pulse raiser. When performing my warm up I will cover three different stages the first being the pulse raiser, then dynamic stretching and finally static stretching.

When warming up got rugby I would start with dynamic stretching performer such tasks as high knees, heel flicks and a selection of different dynamic stretches. Once I finish this I move onto a pulse raiser with static stretches. This involves running around to pick and stopping at each corner and performing a static stretch. To finishes the warm up I would sprint to the halfway line then jog back either formless about five times. I will not be able to perform this warm up in the gym but I can take sections of this and develop and change it so it can be performed in the gym.

General warm up

1. **Treadmill**

   I will perform this for 6 minutes. Start with a jog at speed level of 8 for 1 minute at the end of the minute will increase the speed to a sprint at speed level of 14. At the end of the 30 seconds I will repeat the jog then the sprint until I have worked for 6 minutes.

2. **Cross trainer**

   I will perform this constantly at the same speed for 5 minutes

These activities will help raise my heart rate helping to raise cardiac output. They will get blood flowing and raise temperature of my muscles. The activities will also help get me into optimum working heart rate.

Static stretching

By doing static stretching you will lengthen the muscle sand tendons this allows movement at the joint. I will use static stretching in both the warm up and cool down. When performing each stretch I will hold for 20 seconds. As my circuit uses all the body ill will try and stretch all the main muscles groups

Examples:

Deltoids, Triceps and biceps, chest, upper and lower back, abdominals, hamstrings, quadriceps and gastrocenmous.

Dynamic stretching

Dynamic stretching is a range of movements that also helps warms the muscles and loosens the joint. The movement's make the muscles, tendons and joints do usual movements that there not used to doing, this causes them to stretch. It is important that the general warm up and static stretches have been perform first as if they are not the muscles will not be warm and performing the movements could cause an injury. Dynamic stretch is important especially when performing specific sports as the movements being performed in dynamic stretching are very similar to the movement in the sport. As my training program uses most of the body I will use a range of movements that will stretch most of the muscles. The stretches I will perform are:

- Arm rotations
- Neck movement
- Hip rotations
- High knees
- Leg flicks
- Lungs
- Squat walk

Cool down

A cool down is very important as it can prevent blood pooling. Blood pooling is when the heart is not get enough blood returning back to it. The blood that returns back to the heart is called venous return. Starling's law of the heart starts that if return increases then stroke volume will increases which will cause cardiac output to increases. If a performer is working at a high intensity then stops their work out without a cool down then blood pooling is most likely to occur. When blood pooling occurs the performer will faint or pass out. The body will do this because it is a lot easier for the heart to work if it's lying down. The body has five functions that help prevent blood pooling, these are; pocket value, muscle pump, respirator pump, smooth muscle and gravity, but when we stop exercising two of these functions stop working. The other three functions are not efficient enough to bring venous return back to normal. By doing a cool down the other two functions continue to work to help venous return get back to normal.

Personal cool down

My cool down will have three elements light exercise, some stretching and finally refuelling.

Light exercise

The light exercise will not be intense or put any strain on the body. A light jog or fast walk for about 5 minutes will be efficient.

Stretching

The stretching will be very similar to the stretching in the warm up. Stretching in the cool down is very important as this is going to prevent any muscle aches and prevents muscle cramps.

Upper body

Triceps stretch Put your hand on your back and point elbow towards the ceiling. With you r other hand grab your elbow and pull toward your head.
Shoulder stretch Put your arm across your chest and with your other hand hold your elbow and pull it wards you.
Latissimus dorsi stretch Put your hand above your head and stretch as far as you can

Lower body

Hamstring stretch Put one foot in front of the other and bend down to touch or tows without bending the knee of the leg out in front.
Quadriceps stretch Lift one leg and grab it with your hand and hold it.
Gastrocnemous stretch put on leg in front of the other. Do not bend the back legs knee and push forward.

Refuelling

During exercise your muscles burn off and use a lot of glycogen. After exercise this needs to be replaced with a few hours after exercise. The most effects way to replace the glycogen is to have water and fruits first then after a couple of hours have a large meal. This must have protein and carbohydrates.

Health and safety

When performing my circuit training programs there are specific things that I have to be careful about to prevent harming myself or the others around me.

When in the gym it is important to put back any equipment that I may have used as this will become a trip hazard. I have to be careful it the way in which I use the equipment as I may danger it.

I need to know my limits and understand my own stretch. I may injury myself if I try to left weights that are too heavy for me. Also if I'm lifting weights that are too heavy for me when I may pick up a poor technique, for example performing a squat not going down to the correct le3vel and not keeping my back straight may cause a spinal injury.

Before using any of the machines I should check to see if they are safe to use. If they are broken in any way I should avoided using them as they may injury me. Things to look for would be if weights are not succour, if the pin does not fit probably, does the cable look worn.

When performing my body weight circuit I will give myself plenty of room so that there is no chance of hitting or falling on any objects. Any equipment used in the body weight circuit should be strong enough to take my body weight and they should be placed on a succour base.

When performing most of the exercises it's a good idea to have a spotter that can help you perform the task if you are struggling and can help remove the weight if the movement has gone wrong. A spotter will be a lot of help when using free weights as this is where most injuries can occur.

It is important to have plenty of drink when performing as you may become dehydrated. To prevent dehydration to may have plenty of drink before, during and after performing. If you ever start to feel ill when performing it is advisable to stop as your body is not going to have the energy to perform probably and it may do you more harm than good.

Finally it is important to where the correct clothing in the gym and correct foot wear. This is because wearing siren clothing may cause injury for example baggy clothing could get court in the machines, tight clothing could cause the restriction in movement that could stretch and strain muscles. Clothing that does not restrict movement and foot wear that supports the foot is most effective.

Exercise tables

		Agonist	Antagonist
	Resistant's machines		
Body	Chest press	Pectoralis major, triceps brachii, deltoid	Trapezius, Latissimus dorsi, teres major, teres minor, infraspinatus and subscapularis
	Lat pull down	Latissimus dorsi	Middle deltoid, Posterior deltoid and posterior deltoid
	Shoulder press	Middle deltoid	Latissimus dorsi
	Butterflies on the cable machine	Pectoralis major	teres major, teres minor, infraspinatus and subscapularis
	Resistant bands		
	Bicep curl	Bicep brachii	Triceps brachii
Core	Abdominal crunch using cable machine	Rectus abdominis	Erector spinae group
Lower body	Leg extensions	Rectus femoris, vastus intermedius, vastus lateralis and vastus medialis	Semitendinous, Iliopsoas, gluteus maxius, biceps femoris and semimembranosus
	Leg flexions	Semitendinous, Iliopsoas, gluteus maxius, biceps femoris and semimembranosus	Rectus femoris, vastus intermedius, vastus lateralis and vastus medialis
	Leg press	Rectus femoris, vastus intermedius, vastus lateralis and vastus medialis	Semitendinous, Iliopsoas, gluetues maxius, biceps femoris and semimembranosus

	Free weights	**Agonist**	**Antagonist**
Upper body	Dung bell press	Pectoralis major, triceps brachii, deltoid	Trapez, Latissimus dorsi, teres major, teres minor, infraspinatus and subscapularis
	Bench press bar	Pectoralis major, triceps brachii, deltoid	Trapez, Latissimus dorsi, teres major, teres minor, infraspinatus and subscapularis
	Bicep curls	Biceps brachii	Triceps brachii
	Skull crushers	Triceps brachii	Biceps brachii
	Shoulder press	Middle deltoid	Latissimus dorsi
	Shoulder raises	Posterior deltoid	Lattissimus dorsi
	Shrugs	Trapezius	Pectoralis major

	Free weights	Agonist	Antagonist
Core	Sit ups will medicine ball	Rectus abdominis	Erector spinae group
	Twists with medicine ball	External obliques and internal obliques	External obliques and internal obliques
Lower body	Lungs	Rectus femoris, vastus intermedius, vastus lateralis and vastus medialis	Semitendinous, Iliopsoas, gluteus maxius, biceps femoris and semimembranosus
	Squats	Rectus femoris, vastus intermedius, vastus lateralis and vastus medialis	Semitendinous, biceps femoris and semimembranosus
	Deep squats	Rectus femoris, vastus intermedius, vastus lateralis and vastus medialis	Semitendinous, Iliopsoas, gluteus maxius, biceps femoris and semimembranosus

		Agonist	Antagonist
Upper body	Press up	Pectorlias major, triceps brachii, deltoid	Trapezius, Latissimus dorsi, teres major, teres minor, infraspinatus and subscapularis
	Dips	Triceps brachii	Biceps brachii
	Pull ups	Biceps brachii	Triceps brachii
core	Crunch's	Rectus abdominis	Erector spinae group
	Sit up	Rectus abdominis	Erector spinae group
	Plain	Rectus abdominis	Erector spinae group
	Leg raises	Rectus abdominis	Erector spinae group
	5 inch leg raise	Rectus abdominis	Erector spinae group
lower	Box jumps	Rectus femoris, vastus intermedius, vastus lateralis and vastus medialis	Semitendinious, Iliopsoas, gluteus maxius, biceps femoris and semimembranosus
	lungs	Rectus femoris, vastus intermedius, vastus lateralis and vastus medialis	Semitendinious, Iliopsoas, gluteus maxius, biceps femoris and semimembranosus
	Standing calf raises	Gastrocnemous, soleus	Tibialis anterior

Muscle fibres

There are three different types of muscle fibres that will be affected when I'm exercising. I will have specific exercise to work each separate muscle fibre;

Slow oxidative fibres

These fibres are used during endurance exercises. An example would be when doing press ups; you would be doing a muscle endurance exercise so working the slow oxidative fibres, 30 reps and 2 sets of these would be the most effective.

The contraction speed of the fibre is slow and the strength is quite weak. These fibres are also very resistance to fatigue

Fast oxidative glycolytic fibres

These fibres are more strength related. Exercises such as jogging or running are related to these fibres. Pull ups would be a good example, 10 reps and 3 sets.

The contraction speeds of these fibres are fast and they have intermediates strength contraction. They are also moderately resistant to fatigue.

Fast glycolytic fibres

These fibres are very strong powerful. They are used in explosive exercises such as weight lifting. An exercise that would most benefit these fibres would be a weight baring exercise. The bench press would work the fibres if I lifted heavy weights. 5 reps and 5 sets would work the fibres affectively.

The contraction speeds of these fibres are very fast and the strength during the contractions are high. But these fibres have very little resistance to fatigue.

Resistance machine and three weight circuits

When performing all of the exercise it is important to perform the exercise in the correct way to get the best benefit. It is also safer. It is also important to read the instructions on the resistance machine in order to perform the exercise most effectively.

Lie back on a flat bench. Hold the bar with over hand grip. Hold the bar slightly wider than shoulders with apart. Hold the bar with your arms full extended

Shrugs

stand shoulder width apart with a kettle bell in each hand. Raise your shoulders into a shrug position and hold for 1 second then return to the starting position.

Lower the bar towards the lowest part of your chest it should slightly touch. Throughout this movement you should try and keep your arms as close to your body throughout the movement

Lungs

put your head under the bar and rest this on your shoulders, also hold the bar with both of your hands to help balance it. Your feet should be shoulders with apart. Always keep the balls of your feet on the floor at all times throughout the movement. Slowly bend your knees and lower yourself. Keep your back straight throughout the movement. Lower yourself until your thighs are parallel with the ground. Then return to standing straight.

Sit ups with medicine ball

hold the medicine ball across your chest. Lie flat on the floor with knee's up. Slowly raise your upper body until it's at a 90 degree angle. Then lower it.

Skull crushers

lie flat on a bench. Take the bar and hold it over your head with over hand grip. Bend your elbows and slowly lower the bar over your head and stop a couple of inches about your head. Keep your elbows in. Then rise bar up to starting position.

Shoulder press

Sit down on the shoulder press machine. Adjust the seat so that your legs are at a 90 degree angle. Hold the handles with over hand grip. Put the pin on the appropriate weight. Then push the hands up by extending your arms up wards. Then slowly lower them.

Bench press

Sit down on the bench press machine. Adjust the seat so that your legs are at a 90 degree angle. Hold the handles with over hand grip. Put the pin on the appropriate weight. Then push the hands out wards by extending your arms out wards. Then slowly lower them.

Butterflies

Adjust the cables so they are at should high. Put the pin on the appropriate weight. Hold the handles with under hand grip. Take a step away from the machine and pull the cables over in front of you without bending your elbow. Then slowly let the cables go back in and stop when your arms and body are parallel. Then go back to the cable in front of you.

Lap pull down

Sit on the machine move the leg support so it sits on top of your legs. Adjust the weight to be appropriate to you. Then with over hand grip grad the bar and pull it down to just below your chin. Then raise it up until your arms are fully extended. Then repeat this.

Leg press

sit on the seat and put your feet on the back bored in front of you. Adjust the seated so that your legs are just less than 90 degrees. Put the pin on the appropriate weight. Push on the back bored until your legs are full extended. Then lower yourself until your legs are at a 90 degree angle then push up again.

Body weight circuit movements

Sit up

lie flat on the floor with knee's up. Slowly raise your upper body until it's at a 90 degree angle. Then lower it.

Dips

use a chair. Put your hands on the edge of the chair and then put your legs out in front of you. Then lower yourself by bending your elbows. Then raise them to return to starting position.

Crunches

lay on the floor with knees up and feet on the floor. Raise just you shoulder blades of the floor and then lower them. Repeat this movement.

Pull ups

Grab the bar with a under hand grip. Pull yourself up by bending your elbow. Pull yourself up until your chin is over the bar then lower yourself. Repeat this movement.

Press up

lie on the floor put your hands shoulder with apart. Keep your back straight throughout the whole movement. Push yourself up until your arms are fully extended and then lower. Repeat this movement.

Plank

get in a press up position. Then keep your body lifted but put your elbows on the floor. Keep your back completely straight. And hold this static position for as long as possible.

Leg raises

lie flat on the floor with legs full extended. Raise legs without bending knees to a 90 degree angle. Then lower until your legs are 5 inches away from the floor

Leg raise 5 inches

lie flat on the floor. Raise legs without bending knees until legs are 5 inches away from the floor. Hold this position for as long as possible.

Box jumps

stand with legs should width apart. Lower by bending knees into a squat position, this is when legs go under a 90 degree angle. Do this without bending your back. Then raise yourself then jump. Then go back to the starting position.

Lungs

Stand leg shoulders width apart. Keep your back straight. Put one foot forward and lower yourself by bending your knees. Stop when your front knee is at a 90 degree angle. The go back to the starting position the do the same with the other leg.

Standing Calf raises

Using stairs stand on the edge of a step with the back of your feet hanging over. You can use the stair rail to help to balance. Lower your feet to as low as possible then raise then by extending your feet, standing just on your toes then lower.

Weight lifted in ten reps		Start	Week 4	Week 8	Week 12
	Free weights				
Upper Body	Dung bell press				
	24kg in each arm	24 in each arm	28 in each arm	30kg in each arm	
	Bench press bar	55kg	57.5kg	62.5kg	65kg
	Bicep curls	12kg in each arm	12kg in each arm	12kg in each arm	14kg in each arm
	Skull crushers	12.5kg	13kg	15 kg	15kg
	Shoulder press	6kg in each arm	6kg in each arm	20kg in each arm	22kg in each arm
	Shoulder raises	6kg in each arm	6kg in each arm	8kg in each arm	8kg in each arm
	Shrugs	15kg in each arm	6kg in each arm	8kg in each arm	8kg in each arm
Core	Sit ups will medicine ball	2.5kg	3kg	5kg	5kg
	Twists with medicine ball	2.5kg	3kg	5kg	5kg
Lower body	Lungs kettle bells	12kg in each arm	14kg in each arm	16kg in each arm	20kg in each arm
	squats	80kg	90kg	105kg	120kg
	Deep Squats	30kg	40kg	50kg	60kg

How many performed in a minute	Body weight	Start	Week 4	Week 8	Week 12
Upper body	Press up	56	55	58	60
	dips	47	5	52	54
	Pull ups	32	34	37	40
core	Crunch's	30	34	36	41
	Sit up	27	33	35	36
	Plain	Lifted for 42 seconds	Lifted for 55 seconds	Lifted for 61 seconds	Lifted for 67 seconds
	Leg raises	40	42	43	45
	5 inch leg raise	Lifted for 34 seconds	Lifted for 35 seconds	Lifted for 42 seconds	Lifted for 52 seconds
lower	Box jumps	27	28	3	31
	lungs	41	45	46	48
	Stranding calf raises	49	56	56	59

Weight lifted in reps		start	Week 4	Week 8	Week 12
	Resistant's machines				
Upper Body	Chest press	60	65	73	80
	Lat pull down	45	47.5	48	50
	Shoulder press	25	29	33	35
	Butterflies on the cable	10.25	12.5	12.5	13.25
	Resistant bands Bicep curl	Resistances 3	Resistances 3	Resistances 4	Resistances 4
Core	Abdominal crunch using cable machine	3.5	4	4.5	5
Lower body	Leg extensions	35	35	37.5	40
	Leg flexions	40	43	46	50
	Leg press	85	90	95	105

Results tables

Weight lifted in ten reps		Before training program	After training program
	Free weights		
Upper body	Dung bell press	24kg in each arm	30kg in each arm
	Bench press bar	55kg	65kg
	Bicep curls	12kg in each arm	14kg in each arm
	Skull crushers	12.5kg	15kg
	Shoulder press	16kg in each arm	22kg in each arm
	Shoulder raises	6kg in each arm	8kg in each arm
Core	Sit ups will medicine ball	2.5kg	5kg
	Twists with medicine ball	2.5kg	5kg
Lower body	Lungs kettle bells	12kg in each arm	20kg in each arm
	squats	80kg	120kg
	Deep squats	30kg	60kg

How many performed in a minute	Body weight	Before	After
Upper body	Press up	56	60
	Dips	47	40
core	Crunch's	30	41
	Sit up	27	36
	Plain	Lifted for 42 seconds	Lifted for 67 seconds
	Leg raises	40	45
	5 inch leg raise	Lifted for 34 seconds	Lifted for 52 seconds
lower	Box jumps	27	31
	lungs	41	48
	Stranding calf raises	49	59

Weight lifted in ten reps		Before	After
	Resistant's machines		
Upper body	Chest press	60	80
	Lat pull down	45	50
	Shoulder press	25	35
	Butterflies on the cable machine	10.25	13.25
	Resistant bands Bicep curl	Resistances 3	Resistances 4
Core	Abdominal crunch using cable machine	3.5	5
Lower body	Leg extensions	35	40
	Leg flexions	40	50
	Leg press	85	105

Results before the training program

Weight: 71kg

Fat percentage: 3.86

Blood pressure: 122/71

Results after the training program

Weight: 75kg

Fat percentage: 3.84

Blood pressure: 199/70

Evaluation

When I started my fitness program I performed different tests that covered all the different areas that I hope to improve in. I performed these tests every 4 weeks with in my training program (at the end of week 4,8, 12 and at the end of the final week). This tracked my progress and showed what areas that I needed to work on. Also at the start and end of the training program I measured my weight body fat and blood pressure.

Muscular endurance – my goal with muscular endurance was to impove it to the point at which I would be able to play a full game of rugby to the best of my ability. I wanted to be making strong runs and big tackles in the later part of the game. Since I've finished my training program I have played game of rugby and I do believe that I could fill the benefits of my trains. I was still feeling strong in the later stages of the games. I believe that the training program has work as I'm able to play a lot better in the closing stages of a ruby game.

Muscular strength – I wanted to improve my muscle strength to improve and help my ability when I am in a scrum, ruck, making a run or tackling. If I improve my muscular strength my runs will be more powerful and I will be able to drive stronger meaning I will be able to gain more ground. The movement and exercise that I have done in the training program were specific to helping me improve in these areas. When I played a rugby game after the training program I could definitely feel the improvement in my strength. I felt a lot stronger in the tracks and in the scrum. My ability to drive was a lot more powerful when I was running.

I also had short term goals that I believe I have achieved. I enjoyed going to the gym and it did relief most stress that I had at the time.

Both circuits were affective but there was room to improve them. If I was to do this again I would add more exercise and increases the reps. I would also change the way that I performed the exercises, instead of doing a whole body circuit I would do specific areas each day. For example one day I could do back and biceps and the other chest and triceps and so on. When I did the full body I became very tired as my body was overloading. This meant by the end of the week it was very hard to put in full effort. I would also have to change my goals and focus to have a target to keep me progressing.

A2 G454 LOG BOOKS

CANDIDATE G

Rugby Union Officiating

Physical Education

OCR Advanced GCE Unit G454
Log book cover sheet and authentication statement: Officiating

Centre Number		**Centre Name**	
Candidate Number		**Candidate Name**	

Please indicate below to which Outdoor and Adventurous Activity the log book and authentication statement relates.

Log book element required	**Present? (please tick)**
Record of officiating activities over a twelve month period	
Record of a minimum 10 sessions officiated during the assessment period	
A minimum of four qualified assessor evaluations of the matches officiated	
Evidence of risk assessments undertaken	
Accompanying DVD/CD-Rom record as per the criteria	
Details of health and safety issues relevant to the activity	
Details of Child Protection procedures in operation and evidence of DBS clearance as appropriate	

Assessment Band Descriptor which log conforms to

Band 1: A detailed and comprehensive log containing all the prescribed information is present	
Band 2: A detailed log containing all the prescribed information is present	
Band 3: A detailed log containing most of the prescribed information is present	
Band 4: A log containing some of the prescribed information is present	
Band 5: A log containing little of the prescribed information is present	
Mark Awarded	Max 40

Authentication statement
I can confirm that this candidate has fully completed the activity as detailed in this log book, meeting all health and safety requirements, and that the material in this log book is the candidates own work.

Name of instructor/teacher responsible	

Signature		Date	

The New Laws Being Trialled (That Effect My Games) During Season 2012-13

9.B.1 Taking a conversion kick

The kicker must take the kick within one minute and thirty seconds (ninety seconds) from the time a try has been scored. The player must complete the kick within one minute and thirty seconds even if the ball rolls over and has to be placed again.

Sanction: The kick is disallowed if the kicker does not take the kick within the time allowed

12.1(e) Quick throw-in after knock-on or throw forward

When the ball goes into touch from a knock-on or throw forward, the non-offending team will be offered the choice of a lineout at the point the ball crossed the touch line or a scrum at the place of the knock-on or throw forward. The non-offending team may exercise the former option by taking a quick throw-in.

16.7(c): Five seconds to play the ball from the back of the ruck

When the ball has been clearly won by a team at a ruck and the ball is available to be played the referee will call "Use it!" after which the ball must be played within five seconds. If the ball is not played within the five seconds the referee will award a scrum and the team not in possession of the ball at the ruck is awarded the throw in.

19.2: Quick throw-in

For a quick throw in, the player may be anywhere outside the field of play between the line of touch and the player's goal line.

20.1: Forming a scrum

The referee will call "crouch" then "touch". The front rows crouch and using their outside arm; each prop touches the point of the opposing prop's outside shoulder. The props then withdraw their arms. The referee will then call "set" when the front rows are ready. The front rows may then engage. The "set" call is not a command but an indication that the front rows may come together when ready.

21.4(b): Lineout alternative

A team awarded a penalty or a free kick at a lineout may choose a further lineout, they throw-in, parallel to the point of infringement. This is in addition to the scrum option

4.3: Stud Configuration

The sole configuration below was approved for trial:

Rolling Substitutions (Interchanges)

From level 5 matches and below, rolling substitutions will now be aloud. In league and cup matches their specific rules will state how many substitutions they are aloud and therefore determining how many interchanges they can have.

Number Of Replacements	Number of Player Interchanges
3	8
4	9
5	10
7	12

After all interchanges have been used, no more can be carried out. If a player is injured after this, the team must play with one player short. If this player is a front row specialist, uncontested scums will be ordered. This will also be used to replace the blood bin, by giving the team unlimited time to treat blood but an interchange is used to take them off

and another one to put them back on. Finally, only 2 can be carried out at any one time and with full knowledge of the referee.

Planning and Organisation

Planning and Organisation starts at home prior to any match I am going to referee. There are two main reasons for this -

a) I need to know what colour kit the two teams wear. Once I know this information I can then prepare two sets of kit for myself, making sure that they are of different colours to the playing teams. This is to prevent any confusion during the game as to my role as a referee (not to look like one of the playing teams).

I am able to find out information re the teams colours in a number of ways:

i) Previous knowledge (having refereed both teams before)

ii) I can ask the Fixtures Secretary/Coach when they ring me to confirm the game and inform me of the kick off time.

iii) Website – I could look online at the individual Clubs website, many clubs put their club colours on the web under one of their sub headings or there are normally photographs either of the Teams or individuals (sometimes the whole club)

iv) The Devon Handbook – some clubs have had their kit colours written into the handbook (each Devon Referee is issued with their own copy of the handbook at the beginning of each season).

b) Type of Game – Age of Player

I regularly referee games played by various age groups and abilities. For example, this season so far I have refereed Under 14's/U15's/U16's both at club level and school matches, also senior games ranging from 2nds and 3rds, Ladies and Touring Sides.

Each game has to be handles and refereed in slightly different ways. I have given a few examples below: -

i) As the players get older (Juniors) the game progresses Under 13's only have a five man scrum whereas at Under 15's they have the full eight man scrum. Also junior rugby varies in lineout rules. Under 14's and U15's jump but under 16's are allowed to lift their players.

ii) Senior Rugby – At present I am qualified to referee up to and including 2nds seniors and Under 16's and below. Quite often 2nd and 3rd teams are made up of previously 1st team members who maybe have suffered an injury that doesn't let them play 1st team or they may be getting older and the young players are taking their places in the 1st team squads, these reasons alone may affect their ability. Quite often these matches are much more confrontational. Knowing this type of information enables me to check and research the rules that may differ between age groups and senior rugby, thus allowing me to be more prepared for the game.

iii) Another reason I require this information is because the players require different actions and verbal information from me. The younger the squad the more information and direction they may require from me. They may not necessarily understand all the rules and laws of rugby. For example, when relating to a younger age group of juniors and an infringement occur and I blow my whistle, this may give the opposing team a penalty. I need to explain to the players why I have done this and the reasons and actions behind the whistle. I need to make sure I do this each time and then hopefully they will understand this will enable the game to flow. I also make sure that I repeat all my calls at least twice and over emphasise my signals, in hope that this helps them understand the game and learn from their experience.

iv) However in senior rugby, I blow my whistle, signal, inform the players of my decision and continue with play. It is hoped that the senior sides should be far more experienced and that they normally know what they have done wrong (even if they do attempt to deny it – which often leads me to having to confirm my decision)

I may also have to alter my style of refereeing if there is a different in ability of teams

i) If two teams of less ability were playing I may have to consider overlooking minor fouls and some of the

infringements. Otherwise the game would be continually stopping and starting. This could result in the players becoming frustrated and also boring for spectators.

ii) If the two teams were very strong and of good ability and equally matched I would not be so lenient.

The Laws of Rugby

I used to play rugby myself for approximately 9 years both at school and at club level. I have also watched a great deal of rugby both at local level and premiership league either on the sidelines or television. I believe this has assisted me with my referring as I have learnt the rules as a player and have also had the experience of watching other referees interpret the laws and watch their mannerisms and traits.

I also attend my local laws meeting, which are held monthly by the Devon Rugby Referee Society (DRRS). At these meetings we are informed of any updates in the laws and any variations. We have group discussions as to how we can improve and what we think others can do to help. New laws for the 2012-13 season have been released for trial across the world, these will be explained later in my log book.

I also have an experienced coach (Ivan Gunn) which I have had now for 2 seasons for and am also fortunate to have Andy Coles as a mentor and development officer, both are available for me to con contact should I have any queries regarding laws or anything else I wish to discuss. Ivan also comes along occasionally to watch my referring, offering his support and constructive advice.

allowed to lift the line outs and under 10's are not allowed to hand off, whereas Under 16's and above can do both.

When referring I always arrive at the club/pitch at least 1 hour before kickoff. I ALWAYS examine and check the pitch even if I have been there before. I look for possible dangers/hazards for instance glass, bottles or large stones as these could cause injury to the players and myself.

The pitch also has to be roped off (RFU Regulations) this is to separate players from spectators. This is for the safety of everyone; it stops the supporters merging onto the pitch and prevents any tackled player sliding off the pitch into the spectator.

I also plan my journey prior to leaving, I have to make sure I know the route to the club/pitch and in case of any traffic problems or accidents allow extra time and also an alternative route.

Child Welfare is a major important factor. Each rugby club had an appointed Child Safeguarding Officer. This person has attended an RFU run course and gained the necessary certification. They are responsible for ensuring anyone who works or assists with the children has an enhanced CRB (Criminal Records Bureau); they also keep the committees up to date with Child Protection issues. It is this person who should also make sure that a copy of the clubs Child Protection/ Welfare Policy is displayed in a prominent place within the club.

Most DRRS Referees currently have an enhanced CRB done through the RFU at Twickenham; I am one of those Referees. However, recently it has been decided that this is no longer a necessity for Referees to have this check as they have no actual regular contact with each player. Referees however will still need to abide by general ruling, i.e. not sharing showers with players or providing lifts. Common sense should prevail!

Health and Safety

Hazard	How It Is Control / Reduced
Slipping, falling and tripping	All players are advised to wear studded boots. There are also RFU guidelines to boots and footwear that are being worn during the game. The studs are not allowed to be sharp and skate shoes are not acceptable.
Injuries	A qualified first aider should be on hand at all games, who is responsible for the care and treatment of all injured players on the pitch.
Adequate warm ups (injury prevention)	Junior teams, must have qualified coaches who are responsible for the warm up of their players and to help prevent injuries. The referee has a duty of care, and if he thinks the players are at risk, the game can be abandoned.
Violence/inappropriate behaviour	The DRRS and RFU have very strict rules on the consequences for inappropriate behaviour on the rugby field. Receiving of a RED CARD for violence could result in a fine and/or match band. In this situation the referee is required to write a full scaled report.
Cuts/scratches	The referee is to make sure there are no sharp objects on the pitch and should check everyone's clothing / equipment (mainly studs) to make sure the match is safe to be played and no injury is likely to be inflicted. Also no jewellery should be worn on the pitch or non IRB certified equipment.

Furthermore, all coaches are required to be specifically trained and have qualifications to help prevent injury further. This is mainly taught through the tackle as the players should know how to tackle properly and safely. Each club must have a well-equipped first aid kit and access to a stretcher ASAP! Also there must be at least one person available with a First-aid certificate to treat injuries.

Risk Assessment Sheet			
Pitch: Newton Abbot RFC		**Date: 13/11/2012**	
Hazard	Who Might Be Harmed	Precautions In Place	Any Further Actions Required To Help Control The Risk
Posts	Players / Referee	Post protectors are applied, which reduces the risk of injury.	-
Unsecured goal posts	Players / Referee	Placed deep into the ground.	-
Players being tackled into touch	Players / Spectators	Fence / rope, separating the spectators from the field of play is placed of a 3m distance from the touch line.	-
Rubbish on the pitch	Players / Referee	Removed by myself during my pitch inspection	-
Wet pitch	Players / Referee	I spoke to both coaches about the risks, but I deemed the pitch safe and everyone was happy to continue play.	Observe play and weather/ pitch conditions for any increased risk of injury.
Rocks	Players	During my pitch inspection I removed as many as possible that I came across.	Informed the players and asked them to remove any they came across.

Risk Assessment Sheet			
Pitch: South Dartmoor Academy		**Date: 29/02/2012**	
Hazard	Who Might Be Harmed	Precautions In Place	Any Further Actions Required To Help Control The Risk
Posts	Players / Referee	Post protectors are applied, which reduces the risk of injury.	-
Unsecured goal posts	Players / Referee	Placed deep into the ground.	-
Players being tackled into touch	Players / Spectators	Fence / rope, separating the spectators from the field of play is placed of a 3m distance from the touch line.	-
Rubbish on the pitch	Players / Referee	Removed by myself during my pitch inspection	-
22m and half way flags incorrectly positioned	Players	I requested the home team repositioned the flags to the correct location prior to the match.	-
Rocks	Players	During my pitch inspection I removed as many as possible that I came across.	Informed the players and asked them to remove any they came across.

Risk Assessment Sheet			
Pitch: Ivybridge RFC		**Date: 24/04/2012**	
Hazard	Who Might Be Harmed	Precautions In Place	Any Further Actions Required To Help Control The Risk
Posts	Players / Referee	Post protectors are applied, which reduces the risk of injury.	-
Unsecured goal posts	Players / Referee	Placed deep into the ground.	-
Players being tackled into touch	Players / Spectators	Fence / rope, separating the spectators from the field of play is placed of a 3m distance from the touch line.	-
Rubbish on the pitch	Players / Referee	Removed by myself during my pitch inspection	-
Wet pitch	Players / Referee	I spoke to both coaches about the risks, but I deemed the pitch safe and everyone was happy to continue play.	Observe play and weather/ pitch conditions for any increased risk of injury.

Risk Assessment Sheet			
Pitch: Cullompton RFC		**Date: 01/09/2012**	
Hazard	Who Might Be Harmed	Precautions In Place	Any Further Actions Required To Help Control The Risk
Posts	Players / Referee	Post protectors are applied, which reduces the risk of injury.	-
Unsecured goal posts	Players / Referee	Placed deep into the ground.	-
Players being tackled into touch	Players / Spectators	Fence / rope, separating the spectators from the field of play is placed of a 3m distance from the touch line.	-
Rubbish on the pitch	Players / Referee	Removed by myself during my pitch inspection	-

Risk Assessment Sheet			
Pitch: Crediton RFC		**Date: 29/09/2012**	
Hazard	Who Might Be Harmed	Precautions In Place	Any Further Actions Required To Help Control The Risk
Posts	Players / Referee	Post protectors are applied, which reduces the risk of injury.	-
Unsecured goal posts	Players / Referee	Placed deep into the ground.	-
Players being tackled into touch	Players / Spectators	Fence / rope, separating the spectators from the field of play is placed of a 3m distance from the touch line.	-
Rubbish on the pitch	Players / Referee	Removed by myself during my pitch inspection	-
Wet pitch	Players / Referee	I spoke to both coaches about the risks, but I deemed the pitch safe and everyone was happy to continue play.	Observe play and weather/ pitch conditions for any increased risk of injury.

Risk Assessment Sheet			
Pitch: Salcombe RFC		**Date: 20/10/2012**	
Hazard	Who Might Be Harmed	Precautions In Place	Any Further Actions Required To Help Control The Risk
Posts	Players / Referee	Post protectors are applied, which reduces the risk of injury.	-
Unsecured goal posts	Players / Referee	Placed deep into the ground.	-
Players being tackled into touch	Players / Spectators	Fence / rope, separating the spectators from the field of play is placed of a 3m distance from the touch line.	-
Rubbish on the pitch	Players / Referee	Removed by myself during my pitch inspection	-

Log Book

Home Team	Score		Away Team	Score	Date	League/Cup/Friendly
Topsham U16's	5	V	Exeter Saracens U16's	61	06/11/2011	Exeter University Cup
South Dartmoor 15's	38	v	Coombshead School 15"s	14	09/11/2011	Devon Schools Cup
Newton Abbot U14's	32	V	Ivybridge U14's	7	13/11/2011	Friendly
South Dartmoor U18's	0	V	Devonport High All Boys U18's	7	16/11/2011	Friendly
Devon U16's 1st's	AR	V	Gloucester U16's 1st's	AR	20/11/2011	Friendly (Warm Up Game)
Cornwall U16's 2nd's	17	V	Somerset U16s 2nd's	22	20/11/2011	Friendly (Warm Up Game)
South Dartmoor U14's	7	V	Brixham School U14's	48	23/11/2011	Devon Schools Cup
South Dartmoor U15's	17	V	Torquay Grammar School U15's	7	24/11/2011	Devon Schools Cup – Semi Final
Crediton 3rd's	13	V	Wessex 2nd's	29	26/11/2011	Devon Merit Table 3
Devonport Services U16's	0	V	Kingsbridge U16's	41	27/11/2011	Fishermans Cup
Torquay U16's	65	V	Plymstock U16's	5	04/12/2011	Fishermans Cup
Dartmouth 1st's	12	V	Torquay 2nd's	20	10/12/2011	Friendly
Cullompton 3rd's	7	V	Exeter Saracens 2nd's	43	14/01/2012	Devon Merit Table 2
Newton Abbot 2nd's	76	V	Credition 2nd's	11	21/01/2012	Friendly
Kingsbridge U16's	55	V	Ivybridge U16's	0	22/01/2012	Fishermans Cup
Ivybride 2nd's	3	V	Newton Abbot 3rd's	15	25/02/2012	Devon Merit Table 2
South Dartmoor U18's	38	V	St Boniface U18's	0	29/02/2012	Friendly
Devonport U16's	32	V	Paignton U16's	8	07/03/2012	Fishermans Cup
Brixham 3rd's	29	V	Dartmouth 3rd's	27	17/03/2012	Friendly
Kingsbridge U16's	AR	V	Ivybridge U16's	AR	12/04/2012	Fishermans Cup Final
Cullompton 2nd's	20	V	Crediton 2nd's	17	14/04/2012	Devon Merit Table 1
Ivybridge U16's	5	V	Oakhampton U16's	21	22/04/2012	Devon Plate Final
Devonport 16's	AR	v	Kingsbridge U16's	AR	22/04/2012	Devon Cup Final
Newquay 7's Rugby (Seniors) Tournament (30/06/2012 & 01/07/2012) Refereed 10 Games and AR for 18 Over Both Days						

Truro College Pre-Season Academy (U18s's) Tournament (22/08/2012 & 23/08/2012) Refereed 3 Games And AR for 8 Over Both Days						
Home Team	**Score**		**Away Team**	**Score**	**Date**	**League/Cup/Friendly**
Cullomptons 2nd's	13	V	Newton Abbot 2nd's	38	01/09/2012	Devon Merit Table 1
Brixham U16s	7	V	Torquay u16's	36	02/09/2012	Fishermans Cup
Teighnmouth U16's	5	V	Totnes U16's	66	09/09/2012	Fishermans Cup
Tiverton U16's	74	V	Totnes 2nd	5	15/09/2012	Devon Merit Table 2
Kingsbridge U16's	66	V	Torquay U16's	0	16/09/2012	Fishermans Cup
Paignton 2nd's	27	V	Devonport Services 2nd's	3	22/09/2012	Devon Merit Table 1
Crediton 2nd's	51	V	Travistock 2nd's	0	29/09/2012	Devon Merit Table 2
South Dartmoor U13's	5	V	Kingsbridge School U13's	33	02/10/2012	Daily Mail Schools Cup
South Dartmoor U16's	15	V	Kingsbridge School U16's	67	04/10/2012	Daily Mail Schools Cup
South Dartmoor U13's	0	V	Torquay Grammer School U13's	44	16/10/2012	Daily Mail Schools Cup
Salcombe 2nd's	20	V	Totnes 2nd's	22	20/10/2012	Devon 1
Newcross 1st	26	v	Paignton 2nd's	10	03/11/2012	Friendly

Exercise		Statistics		Week (All figures Are Averages From That Week)																	
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Rowing Machine	Distance	M			500	500		500	500	500			750	750	750	750	750	1000		
		Duration	min			1.40	1.48		1.31	1.29	1.30			2.12	2.02	1.59	1.56	1.57	3.05		
		Tension				5	5		5	5	5			5	5	5	5	5	5		
2	Outdoor Running																				
		Distance	mil			3	3		3	3.5	3.5			3.5	3.5	3.5	4	4	4		
3	Treadmill	Distance	Km			2	2		2	2	3			3	3	3	3	3.5	3.5		
		Speed	kph			12.00	12.00		12.00	12.50	12.00			12.00	12.00	12.50	12.50	11.50	12.00		
4	Crunches	Sets				3	3		3	3	3			3	3	3	3	4	4		
		Reps				30	30		30	35	35			35	35	35	35	30	30		
5	Press Ups	Sets				3	3		3	3	3			3	3	3	3	3	3		
		Reps				20	20		20	23	23			24	24	25	25	26	26		
	Chest Press	Sets				3	3		3	3	3			3	3	3	3	3	3		
		Reps				7	7		7	8	8			8	9	10	10	10	9		
		Weight	kg			50	50		50	50	50			50	50	50	50	50	55		
	Shoulder Press	Sets				3	3		3	3	3			3	3	3	3	3	3		
		Reps				5	5		5	6	5			5	6	6	6	7	7		
		Weight	kg			25	25		25	25	30			30	30	30	30	30	30		

Recovery Time

	Lateral Raise	Sets			3	3		3	3	3		3	3	3	3	3	3	
		Reps			8	8		8	8	8		7	9	9	9	9	8	
		Weight	kg		8	8		8	8	8		10	8	8	8	8	10	
	Leg Extension	Sets			3	3		3	3	3		3	3	3	3	3	3	
		Reps			5	6		6	6	6		7	7	7	7	7	7	
		Weight	kg		80	80		80	85	85		80	80	80	80	80	85	

Explanation To The Summer Training Programme

The table shows my training and recovery during the periodisation of the off-season. I had to train during the off season, to stop my body reversing the muscle I had prior to this time being reduced, which is harder to get back when suddenly starting training weeks later again. Each week was split into 5 training days and 2 rest days. Of these 5 days, 2 were spend in the gym where exercises 1, 3, 6, 7, 8, 9 were carried out. On the other 3 days I did exercises at home, which consisted of 1, 2, 4, 5. All of the exercises were relevant to my sport as well as some developing major muscle groups to help improve general strength. Despite training that often, I kept variation up to help relieve boredm by alternating the order I carried out the exercises and giving myself suitable rewards after a hard session. Furthermore, I modified my training every 2 weeks, to only 2 days a week out of the gym and 2 days in the gym ti make sure that the risk of injury was very low during my off season. As well as my training I also played cricket twice a week.

I kept overload up by continuous testing throughout the weeks, the table below shows this.

Test	Measurement	Component of Fitness	Week 3	Week 8	Week 11	Week 16
Sit & Reach	Centimetres	Flexibility	37	38	38	40
Illlnois Agility Run	Seconds	Agility	19.25	18.16	17.37	16.53
12m Cooper Run	Meters	Stamina	2800	2950	2975	3100
100m Sprint	Seconds	Speed	14.23	13.38	13.05	12.59
Sit-up Bleep Test	Stage	Muscular Endurance	2.14	3.00	3.04	3.06

This helped give me the knowledge on how I was improving and when to progress to a higher frequency, intensity, time or type.

On week 5 I was seriously ill with campylobacter (salmonella) which resulted in my training being forfeited for a week.

During the recovery time, I was carrying out light exercise to keep activity levels up but at a very low intensity to help get my body recovered from a long season. Furthermore, during the pre-season preparation the same was done but also included law training and practice or warm up matches.

Before all sessions I did a thorough warm up to reduce the risk of injury and prepare the body for exercise and after the session I carried out a cool down to help return the body to pre-exercise state and prevent blood pooling.

DEVON REFEREE

Referee Report Form 2011-12

Name: **Referee's Level:** 12 **Society**: DRRS **Date**

Game Level: Friendly 11

Home Team: BRIXHAM 3RDS 29pts v **Away Team:** DARTMOUTH 27pts

Description of the Match and its challenge for the Referee;

This was a friendly local derby game where the players from both sides know each other very well. It was played on a firm green pitch the weather was cool, dry and there was a breeze blowing lengthwise down the pitch. The home side was made up with young players mostly just out of the colds and they played a more expansive game running the ball whenever they had the opportunity, while the visitors consisted of a mixture of older more experienced players and were content to keep the ball tight playing a ten man game. It proved to be a very close game as Brixham frequently chose the wrong options of kicking away a lot of their possession and running back into the forwards and losing the ball. Dartmouth managed to get into the lead which they managed to keep until just before the game ended and Brixham kicked the winning penalty.

SCORES 7-10; 12-22; 26-27; 29-27.

XX managed this game well today he established his authority early on communicating verbally and backing this up with penalties when they failed to listen, so he did not have to give any penalties in the second or third quarters and it was not until the last 10 minutes of the game that he had to penalise again, when the tension rose as the visitors became desperate in their attempts to score the winning points. For a young man of 16 XX showed himself to be a very cool headed referee and he contributed to this game in a positive manner and both sides were complimentary about his performance afterwards. He has a good presence on and off the park, his control and communication was very good to the players and they responded to him positively for the majority of the game.

In his management his verbal and whistle were very good but he does need to get into the habit of communicating using his secondary signals every time he blows for an infringement so that everyone around is informed of the reason for the stoppage.

Please outline up to three areas for improvement (using Key Components) and OFFER SOLTUONS;

TACKLE

At these today too many players were allowed to go off their feet sealing the ball off from their opponent and were not penalised. This closed the recycling of the ball and on occasions stopped it completely. In this friendly today it did not cause too much of a problem but in a league game, where it would matter more, it could have consequences as players may be tempted to take the law into their own hands as they became frustrated.

KICKS

At the kick off and restarts you tent to stand still on the half-way line and have to make a standing start when the ball is kicked so you have to make up a lot of ground to get to where the ball lands. So I suggest, Standing back with the kicker as he starts his run up you go as well so as the ball is kicked you are moving with it and will be able to get to the breakdown quicker.

Please list up to three of the referee's strengths in this match;

SCRUM

You used clear concise verbal instructions and managed to have 20 scrums without any collapses or resets. Very well done.

ADVANTAGE

You used the advantage all game in an attempt to maintain the continuity in it. You informed the players when and what advantage you were playing and when you deemed it over with clear instructions and signalng. You did not return to the original infringement unless none was gained.

Name of advisor **(Block Capitals)**		Please assess the referees match Management **MD**	**Society D.R.R.S** **Date:**

POTENTIAL (Please X the appropriate box.)	
This referee should be offered games at the next level of game	**X**
This referee is correctly graded at this level	
This referee would be more comfortable at a lower level game	

Please send a copy of this form direct to the Referee, and to DRRS grading society

This should normally happen within 24 hours of the game. Email is acceptable.

DEVON REFEREE

Referee Report Form 2011-12

Name: **Referee's Level:** 12 **Society**: DRRS **Date**

Game Level: 10

Home Team: Cullompton 2nd 20pts v **Away Team:** Crediton 2nd 17pts

Description of the Match and its challenge for the Referee; A breezy day, on a good surface, we had 2 teams wanting to play rugby and both felt that they could win. This led to a fast hard fought game with good skills. The Scrum proved a problem as both side were very experienced and, in the main, evenly matched. There was 1 yellow correctly given 10 minutes into the 2nd half against the visitors hooker and a penalty try was given to the visitors in the dying minutes of the game after warnings about offside around the 5m line.
Please outline up to three areas for improvement (using Key Components) and OFFER SOLUTIONS; **Scrums** – This was a problem area on and off throughout the game, with the front row of both teams causing problems and they were warned a number of times. I feel if XX had been harder from early on it could have cut down on this problem and if in doubt warn then penalised the ones who gained.
Please list up to three of the referee's strengths in this match; **Communication** This was good and clear and the signing helped both those playing and the spectators **Advantage** Was well played and led to a flowing game and the penalty advantage was played for exactly the right period of time **Lineouts** – these were well policed and you made them a fair competition
Coaches Comments this was not an easy match and you kept it well controlled – WELL DONE The improvement over the season has been good at the start of the reason you would not have been able to control this match – GOOD LUCK for next season

Name of advisor **(Block Capitals)**		Please assess the referees match Management **SD ND MD G**	**Society D.R.R.S** **Date:**
POTENTIAL (Please X the appropriate box.)			
This referee should be offered games at the next level of game			**YES**
This referee is correctly graded at this level			
This referee would be more comfortable at a lower level game			

Please send a copy of this form direct to the Referee, and to DRRS grading society

This should normally happen within 24 hours of the game. Email is acceptable.

DEVON REFEREE

Referee Report Form 2012-13

Name: **Referee's Level:** 11 **Society**: DRRS **Date**

Game Level: 8

Home Team: Cullompton 2nd 13pts v **Away Team:** Newton Abbot 2nds 31pts

Challenge of the match for the referee;

A very warm sunny afternoon. Lush green grass. A full sized pitch. A young referee and two strong second teams. At the outset both teams showed that they wanted to use the conditions, plenty of quick possession and a lot of running. The Referees challenges would be to extract authority on players of different ages and experience, and to maintain concentration and fitness levels throughout the game.

The referee took control of the game very early on, at the second ruck, after calling "use it or lose it" the scrum half failed to heed the request, and had a scrimmage awarded against him. When questioned, the referee explained his decision in a relaxed and friendly manner. More rare challenges faced the referee, about thirty minutes into the first half there were a collapsed maul close to a corner, in which the home side no. 8 sustained an injury. The physio. Called for an ambulance, as the injury was to the neck area. Whilst waiting for an air ambulance, the referee explored options to continue the game on alternative pitches. None were suitable. He made the correct playing decisions and also kept both sides informed of the situation.

With a break of nearly an hour the re-start for the last ten minutes of the half required firm control from the referee, as a few players appeared to forget their previous good discipline.

The second half was busy, plenty of quick ruck ball for both sides, helped by regular urging from the referee at the tackle/breakdown. The referee is tall with long legs and has a deceptive gliding run that kept him up with play and close to all the breakdowns. The visitors continued to move the ball out to their wings at every opportunity, and scored some swift tries out wide. They were worthy winners.

Referee's strengths in this match;

Management Communication;

Effective with Whistle….Signals Voice and also body language.

Good whistle tone followed by unambiguous signals and clear concise explanations

Continuity, Tackle;

Players were made well aware of their obligations at this phase of play. The referee was at or close to the tackle and ball was available and players rolled away in the majority of occasions. Sanctions were applied when needed.

Please outline areas for development and offer coaching advice or solutions;

Set Phases – Scrummage;

A number of scrums were re-set. A number of scrums were turned through more than 90 degrees.

With props of varying heights and size it is important to encourage them to bind correctly, and to check the position of their arms and grip on the opponent's shirt. Watch the scrum, players backs should be flat, popping up is an indicator of other issues. Be prepared to proffer advice, it is in everyone's interest to have a fair contest at the scrimmage. It is easy to focus on the ball and neglect other areas.

Talk to players at training or in the club house.

Continuity – Ruck & Maul;

There was good work in this area, but there were a number of occasions that non-participants were off-side, the referee was not in the correct position to see them. Some of them were "guards", fringing and creeping back after the referee had signalled them to move back…It is a good idea to step back once the referee has sighted the ball and is aware of its movement. This will give a wider vision of all the players, do not just focus on the ball. Step back, lift the head.

Name of advisor **(Block Capitals)**		Please assess the referees match Management **SD ND MD G**	**Society D.R.R.S** **Date:**
POTENTIAL (Please X the appropriate box.)			
This referee should be offered games at the next level of game			
This referee is correctly graded at this level			**YES**
This referee would be more comfortable at a lower level game			

DEVON REFEREE

Referee Report Form 2012-13

Name: **Referee's Level:** 11 **Society**: DRRS **Date**

Game Level: 9

Home Team: Salcombe 1st 29pts v **Away Team:** Totnes 1st 22pts

Description of the Match and its challenge for the Referee; This was XX's 1st L9 league game and it was between sides next to each other in the table and each wanted the points. On a good pitch and perfect day both teams were happy to run, and a fast game was played in which XX fully played his part. The penalty count was 5-3 in the 1st half 6-10 in the 2nd and no card was awarded
Please outline up to three areas for improvement (using Key Components) and OFFER SOLTUONS; **Positing** This is much improved but some work is still required to get the best view
Please list up to three of the referee's strengths in this match; **Management** This was a game which could have become difficult but it was well managed which kept the lid on and rugby played **Scrums** A quiet word at the right time kept them as a fair safe contest
COACHES COMMENTS I am happy with XX's performance at this game, it was never going to be easy but it was managed to provide a good game for the players an enjoyable game for the mainly knowledgeable spectators I think it is important that XX gets more games at this level to build up his confidence as he is well able to manage them

Name of Coach **(Block Capitals)**		Sign **I.GUN**	**Society Devon** **Date:**

POTENTIAL (Please X the appropriate box.)	
This referee should be offered games at the next level of game	
This referee is correctly graded at this level	**Yes (9)**
This referee would be more comfortable at a lower level game	

Please send a copy of this form direct to the Referee, and to DRRS grading society

This should normally happen within 24 hours of the game. Email is acceptable.

DEVON REFEREE

Referee Report Form 2011-12

Name: **Referee's Level:** 11 **Society**: DRRS **Date**

Game Level: 9

Home Team: New Cross 26pts v **Away Team:** Paignton 2nds 10pts

Description of the Match and its challenge for the Referee;
Local derby between a Junior first XV and a Senior second XV, dry but cold windy day. Challenge would be to control the game but equally to allow both teams to play enjoyable rugby. This might have been a friendly but both teams wanted to win. You handled the game well, players respected your decisions and you contributed to an enjoyable game played in good spirit (only spoiled by the one player with the red card mentioned below). Both teams clearly enjoyed the game and were able to play entertaining open rugby.
Please outline up to three areas for improvement (using Key Components) and OFFER SOLTUONS;
Communication - as mentioned below your signals and whistle were good, you will make things much easier for you if you make your vocal commands louder and with more authority, this will help players who are involved who may not see your signals reduce infringements and help more remote players and spectators more clearly understand your decisions. **Positioning** – You often found yourself on the blind side, you need to move faster and to the open side and to circulate at rusks and mauls. When approaching rucks and mauls try going past the ruck or maul, identify the ball and this will then enable you to get a wider vision of the field of play. Generally try to stop short of the ruck or maul. **Red Card** – we discussed your red card for the punch which occurred directly in front of you and which was absolutely the right decision. However make sure you whistle forcefully immediately and deal with the incident straight away. Do not allow play to continue. Once you dealt with the incident you did it correctly, informing the player and captain, confirming his name and issuing the penalty in the correct place. You also carried on referring the rest of the match calmly and remained in control – well done.
Please list up to three of the referee's strengths in this match;
Control – you had good rapport with the players, you set out your stall with the scrums ensuring they were safe and maintained the gap at lineouts and you maintained consistency throughout the game. **Signals** – your signals were clear and positive throughout the game and use of the whistle and whistle tone was clear and concise. This helped players and spectators understand the decisions being made. **Advantage** – you made good use of advantage and signalled it well and allowed players to make use of advantage when they were able. When no advantage was coming your correctly blew up and restarted play as required.

Name of advisor **(Block Capitals)**		Please assess the referees match Management **SD ND MD G**	**Society D.R.R.S** **Date:**
POTENTIAL (Please X the appropriate box.)			
This referee should be offered games at the next level of game			
This referee is correctly graded at this level			**X**
This referee would be more comfortable at a lower level game			

Please send a copy of this form direct to the Referee, and to DRRS grading society

This should normally happen within 24 hours of the game. Email is acceptable.

Evaluation & Action Plan

Topsham U16's V Exeter Saracens U16's 06/11/11

A good game to referee with both sides in contest for the game; however Saracens kept and maintained the game and got the result. It was a fast paced game and required a lot of keeping up with wingers; my speed is good but can always be improved upon. I managed the players well and kept the game flowing by playing as much as advantage as possible. I feel I was fair but at one stage was more lenient with Topsham as at the time the score was (52-0), this is called contextual judgement and materiality. This is a must for referees to use when refereeing younger age groups as they are playing for enjoyment not just competition.

South Dartmoor Academy U15's V Coombshead U15's 09/11/11

A good game to referee, with both sides in good contest for the ball. I managed to keep the game flowing where possible. Furthermore, I penalised where needed and stopped any occurring problems. However, from this game I still feel I need to improve my circulation at the break down area. This is key as I will continue to miss players infringing on the opposite side of the break down. This will still have to be developed over time as it's a progression thing that will always require work. At the end of the game both coaches approached me and thought I had a "cracking game" and it was "well refereed".

Newton Abbot U14's V Ivybridge U14's 13/11/11

Remembrance Sunday meant we had a minuet silence before the game commenced. I feel I had an amazing game and refereed the game very well. I played lots of advantage as they were a younger side and it was friendly. I used contextual judgement and materiality well to keep the game flowing and allow everyone to enjoy the game. The one thing I feel I can improve upon from this game is to keep an eye of offside players at the breakdown area, as players always try to get away with this infringement. Last season I refereed Newton Abbot U14's on several occasions and had very good feedback from both coaches, as this was the first game I have refereed for them this season. I was eager to hear the comments of the coaches. They both stated that I had improved dramatically; furthermore, the Ivybridge head coach said "It makes a change to have a decent referee, and above all is fit and keep up with the game, well done, brilliant game."

South Dartmoor Academy U18's V Devonport High School All Boys U18's 16/11/11

Difficult games to referee, mainly due to the weather and poor pitch conditions. I arrived an hour before kickoff and there was not a cloud in the sky. After about 5 minutes the clouds came over and it poured with rain, which continued throughout the whole match. This caused the ball to be slippery and as a result knock-ons occurred and scrums were formed. However at scrum time, there were many resets as the ground was becoming water-logged very quickly which caused the players to slip. Despite this, the pitch was in just about good enough condition to continue with play. I tried where possible to play advantage which reduced the amount of scrum time. I feel I need to improve my positioning so I can spot more offsides and penalise when this happens. I received good feedback from both coaches who both said that they were pleased with the close result and I refereed very fairly.

Devon U16's 1st V Gloucester U16's 1st 16/11/11

Today was set to be an enjoyable day as I opted to act as an Assistant Referee to help develop my refereeing skills. I choose this as I would be in constant communication with the referee through a 3-way communication kit, which would help me get an insight into better and more experienced referees and to hopefully pick up some good techniques.

Cornwall U16's 2nd V Somerset U16's 2nd 16/11/11

After the first game, the officials for the second game did not turn up, so as the replacement referee, I was required to referrer the next match, my analysis is under the next game. I was very nervous when I got the news as this was going to be a major test for me. I arrived and both teams were in top form, I did the usual pre-match briefs and they came across as very switched on lads. I controlled the game well and refereed very fairly. I kept the game flowing; which

was fairly easy, due to the high standard of play. The one thing from this game I feel can be improved upon is the breakdown area. I constantly had messy rucks and mauls, which need to be dealt with early on in the game, so players know what to expect. Despite this, both sides enjoyed the game and felt the result was correct. One specific coach also said "I came across as very experienced and that I was the best referee he has seen".

South Dartmoor Academy U14's V Brixham School U14's 23/11/11

This was set to be a tough game to officiate due to the pitch conditions. The night before we had several inches of rain which had saturated the pitch, fortunately, it had the whole day to soak away, but it was still muddy and slippery. Moreover there was also a match played before which did not help at all. I started the game well, keeping the breakdown area clear and playing as much advantage as possible, this I maintained throughout the game. The only thing I could improve on from this game is my communication; I feel I still need to say the team and what kind of advantage it is (E.g. "Scrum Advantage Red" or "Penalty Advantage Blue"). This is important for higher level games as they will want to try and use the advantage as much as possible.

South Dartmoor Academy U15's V Torquay Boys Grammar School U15's 24/11/11

This was set to be a tough game to officiate as they were both strong sides and was in competition to get to the local final. The game kicked off and I was not wrong! The game was fast paced and very few mistakes see made. I improved majority on my communication of advantage, by indicating to the teams who had the advantage and what it was for. Furthermore, I played a lot of advantage (more than usual) to see what effect it had on the game and the players, it seemed to have a positive effect. I learnt this technique from more experienced referees and they said it always has a good effect on lower level games, so I hope to continue with this. The only improvement point from this game is, to keep circulating at the breakdown because I am still missing some infringements.

Crediton 3rd's V Wessex 2nd's 26/11/11

This is probably the hardest game I will ever have to referee. The pitch was in good condition, but the players were of mixed ability and age. this is the hardest thing about referring lower level games. The game kicked off, and it was evident both sides were here for the win. I kept the game flowing very well by playing a lot of advantage and stopped any problems or badgering of the decisions made. The one thing I feel I need to improve on is not getting drawn into the breakdown too much; I need to take a few steps back to get a wider view. Other than that I feel I have a very good (but hard) and enjoyable game.

Devonport Services U16's V Kingsbridge U16's 27/11/11

This was another hard game to referee, mainly due to the large crowd whom seemed to "know all the laws of rugby and have full referee qualifications". I managed the game well and kept it flowing but when it was required, penalties were used. The game was abandoned (by myself) 10 mins before the final whistle due to a serious injury on the pitch. Both sides felt I did a good job and did the right thing by ending the game. The one improvement point I can draw from this game, is to circulate more at the breakdown. This is so I don't miss some offences on the opposite side of the breakdown, which could have a massive effect on the play.

Torquay U16's V Plymstock U16'S 04/12/11

I arrived to a sunny but cold Torquay. The pitch had been played on the day before and was in a terrible condition and very boggy. The game kicked off and both sides were in good contest for the ball. I feel refereed the game well and continued to play a lot of advantage. Furthermore, I communicated well with the player's, indicating the advantage and to which team ("penalty advantage red" or "scrum advantage blue"). This is good as the players know whether to take the advantage or try and play it. The game ended 65-5 which was not a clear representation of how well both sides played. The main thing I still need to improve on is my circulation at the breakdown. This is making me miss infringements that could, in the future, be important to the game and the outcome.

Dartsmouth 1st's V Torquay 2nd's 10/12/11

I arrived to a sunny but freezing cold Dartmouth. The pitch was in good condition apart from sticks and branches on the pitch; I removed as many as I could find. Furthermore, I warned both teams about this and the risks, prior to the

game and requested that they removed them instantly if found. The game kicked off and the quality displayed seemed very good, however this was not the case with the penalty count. As it was a friendly, I was more lenient about using the yellow card until the second half. The player was offside and carried on playing (professional infringement (knew what he was doing and why)). I kept good control of the game and played advantage as much as possible, where possible, to stop any further infringements.

Cullompton 3rd's V Exeter Saracens 2nd's 14/01/12

The game was played on a cold and very wet pitch, which was expected during the time of year. The game was rather easy to referee with Exeter dominating every passage of play except from one mistake in the second half which lead to Cullompton scoring. I felt my control at the scrum and breakdown was very good during this match, with very little resets at the scrum. However, my player management in this game could have been improved with players constantly trying to 'referee the game' however, the team responsible came off the pitch and felt I refereed the game very well and handled there "poor loosing attitude" very well.

Newton Abot 2nd's V Credition 2nd's 21/01/12

I arrived to a dry and cold pitch and to a game that was also set to be an easy one to referee. The home team dominated play right from the off with about 90% possession. I felt I handled the gamr well and especially handled the Newton Abbot players well due to their excessive badgering of decisions. However, my lineout positioning needed to be improved in this game due to me occasionally obstructing a play. Despite this everyone was happy with the game outcome and my referring performance.

Kingsbridge U16's V Ivybridge U16's 22/01/12

I arrived to a dry and cold pitch and to a game that was also set to be the decider game to whom would top the table. The game started and early domination by Kingsbridge helped them throughout the game. the game was very one sided which is shown through the score difference. I felt I controlled the game well and managed the scrums very well. However, I feel I need to improve on the breakdown area to help keep it tidy and stop players thinking it is sometimes ok to infringe.

Ivybridge 3rd's V Newton Abbot 3rd's 25/02/12

The pitch was wet underfoot and very cold in the air. I anticipated a messy and slow game which was not only due to the conditions. The game started and my anticipation was proven, however Ivybridge mainly had the upper hand at most situations. I feel I refereed the game very well; however my control of players I have known for a very long time needs to be improved. This is because they continually try to undermine me and disagree with every decision I make. To improve on this I need to just remain confident and calm in all of my decisions.

South Dartmoor Academy U18's V St Boniface College U18's 29/02/12

The pitch had quite a lot of surface water and the rain was still coming down. After regular pitch inspections, I deemed the pitch just about safe to play on. The game was very messy due to the weather which meant I needed to be extra strict around the contact and breakdown area. I carried this game out to my best ability and both sides were very happy. There appeared to be no major problems with my refereeing performance.

Devonport U16's V Paignton U16's 07/03/12

On a cold and dry Wednesday night under the floodlights of a navy pitch, I had teams in the middle of the table whom both wanted to play fast and wide rugby. The game started ad Devonport immediately took the lead with a try straight off their own kick off. However, their opponents eventually woke up but it was too late. I refereed the breakdown very well in this game but my knowledge at the scrimmage still needs improvement.

Brixham 3rd's V Dartmouth 1st's 17/03/12

On a very warm spring day, I arrived to a friendly which was going to be like no other. Due to their location both teams are major rivals and the derby was assigned to me. The game was very close until the very end where the home side took a penalty goal to win the game by 2 points. I felt I controlled the scrums well and handled the players well.

However, I feel I need to improve on the tackle area as too many players seemed to be trying to infringe out of my sight.

Kingsbridge U16's V Ivybridge U16's 12/04/12

This was the Fishermans cup final which was played on a Thursday evening on Brixham's main pitch. I got the opportunity to AR this game to help improve my referee knowledge and also due to the fact I had refereed these teams on a number of occasions during the season.

Cullompton 2nd's V Crediton 2nd's 14/04/12

This was going to be an enjoyable friendly at the end of the season between two mixed ability sides. The game started and both sides felt they could win, resulting in a fast and physical game. This caused an injury in the second half which resulted in an ambulance being called to take the player away. I felt I managed the players well and kept the tackle area clear. On the other hand, the scrum area still seems to be a problem with the blind side not always being watched. But despite this, both sides were very happy with my performance and were looking forward to hopefully having me next season.

Ivybridge U16's V Oakhampton U16's 22/04/12

This was the plate final of the Devon cup which was played on a cold and very wet Sunday morning on ivybridge's main pitch. I was given the opportunity to referee this game in front of a massive crowd all hoping for a very good day of rugby. The game started and the away side immediately took the upper hand at most plays which lead to lots of shouting and chanting from the home side. The game finished with the away side winning by a reasonable margin. I felt I controlled the game well and kept the tackle and scrums a fair contrast. However, I need to work on refereeing with touch judges and also implementing yellow cards earlier to reduce issues that could escalate later in the game.

Devonport U16's V Kingsbridge U16's 22/04/12

This was the cup final of the Devon cup which was played on a cold and very wet Sunday morning on ivybridge's main pitch. I got the opportunity to AR this game to help improve my referee knowledge and also due to the fact that I had refereed these teams on a number of occasions during the season.

Newquay Surf Sevens 2012

This was a really good opportunity given to me to attend the surf sevens in Newquay for a whole weekend. On the Saturday I was officiating fast paced and very competitive teams all in competiton for a big cash prize. We started at 9am and didn't finish till 8pm. The day was very hot and added to our fatigue. By the second day we were all rather tired and had to start at 10am. The games on the Sunday were all for fun and enjoyment with a much smaller cash prise involved. We finished this day at about 4pm by which point we were feeling like we were going to collapse with tiredness.

Truro Academy Pre-season Competition 2012

This was the second year I was chosen to attend this prestigious event which never disappoints in terms of the skill and speed of games. However, unlike last year I was chosen to referee which added to my excitement and the need for me to be fit. Both of these days also led to lots of fatigue and tiredness but not as bad as the Newquay surf sevens. Overall a very good few days of rugby in a cold and rainy cornwall.

Collompton 2nd's V Newton Abbot 2nd's 01/09/12

This was my first full game of the season and was going to be the biggest test of my refereeing career so far. The pitch was very dry, but had a thick layer of grass. It was a very warm day which also added to the work I was required to put in. I started the game as if we had not had several months off refereeing, which continued right the way through the game. I feel I communicated with the players very well in this game and managed them well. However I feel I need to work on the scrimmage as this proved to be a problem in this match with an uneven matched ability. Overall a very hard game to referee but I feel I managed it well, which is reflected in my assessors report.

Brixham U16's V Torquay U16's 02/09/12

I arrived at the pitch on a sunny Sunday morning; the pitch was damp but soon dried up. This was the first game for both sides and the first time they had ever had a society referee, so a lot of explanation and guidance was required before and during the game; this was also made harder by the trial of the new laws. It was a very even contest until just before half time, when Brixham tired very early on and let Torquay score 2 ties. This was then carried on into the second half when Torquay were the clear winners. I felt my communication and materiality was very good in this game as it was the first game back and many players were unsure about the new laws, so a more lenient referring style was required. However, I feel my positioning was poor in this game, as I kept getting sucked in (due to the player's ability) and sometimes got in the way of ball carries because of this, But despite this, both sides were very pleased with my referring and especially commented on the guidance I gave to their teams.

Teignmouth U16's V Devonport Services U16's 9/09/12

I had never refereed at Teignmouth before, and I was surprised at the condition of the pitch, it was flat and soft as it could be due to a very dry previous few weeks. The game started and both sides were in contention for the game. After the third try, it became apparent that this game was going t get walked over. The visitors were very strong and played quick, wide rugby. I feel my contextual judgement and materiality was perfect in this match, due to the fact that the home side were losing badly. I played lots of advantage and narrow calls I left for the game to continue for the home side. However, my positioning at a breakdown needs to be improved as I can sometimes interfere with moves created by the fly-half. At the end of the fame, both coaches were very pleased with my referring and hope to have me again later in the season.

Tiverton 3rd's V Totnes 2nd's 15/09/12

I have never refereed at Tiverton before, but I had played there. Unfortunately, I had to referee on the second pitch which was flat but very hard under foot with a horrible slope in the far bottom corner. The game started, and it was apparent that Tiverton were the much stronger side. Because of this, the Totnes players kept appealing at my decisions. This ment I had to be more assertive and sell my decisions much more.

Kingsbridge U16's V Torquay U16's 16/09/12

I arrived to a cold but sunny Sunday morning at Kingsbridge. The match was set to be a rather easy one with a strong side against a weak one. It was evident that this knowledge was correct as Kingsbridge scored a try straight from the kick off. Just after half time the coach was offered to carry on as a friendly or finish the match, he choose to carry on which was changed a while after. During this period of play, I let minor problems in the play carry on (e.g. Knock on's) for the visitors as they had lost all moral. This is good use of contextual judgement and also materiality was used appropriately. However, I feel my position at the break down in the 'red zone' needs to be improved to make sure I make the correct decision if a try is scored. Despite this, both sides came off the pitch very happy with my performance.

Paignton 2nd's V Devonport 2nd's 22/09/12

I arrived to a warm but cloudy Paignton pitch. This match was set to be a challenging one to referee, with both sides at equal ability. I refereed the match very well and all were pleased with the way I ha an affect on the game. I feel my management at the breakdown and my player communication was the best so far, which contributed to my thought after the game that it was my best performance to date. However, I still require a bit more work around the scrum, but it has improved from previous matches as I have been attending local club training sessions to help develop this key area.

Crediton 2nd's V Tavistock 2nd's 29/09/12

Because the firsts were at home, we were on the square pitch was about ¾ the size of a normal pic. This made the game easier to referee with the respect of fast play, but very hard in the breakdown. I managed the game well and kept good control of the game. I was firm at the breakdown and made sure that nobody was offending. However, my scrimmage still requires work with offenders on the blind side, but despite this I am making slow progress on this area which is what is expected.

South Dartmoor Academy U13's V Kingsbridge School U13's 02/10/12

This game was set to be very boring for myself as it was a slow and very basic level of rugby. The pitch conditions made it worse as it was saturated and the rain was still coming down. I used contextual judgement very well and let minor mistakes go, so they could play good and proper rigby. However, I struggled at the scrum due to very in-experienced front rows which resulted in many penalties against the home side. This could have been reduced by getting the coaches to coach them the correct technique before the game or during half time.

South Dartmoor Academy U16's V Kingsbridge School U16'S 04/10/12

This game was set to be a difficult one to referee as both sides had strong players and most of whom play for the country. However Kingsbridge domineered from the start and this continued throughout. I was very firm and refereed to a very high standard. However, I felt my stamina (when running at speed for many times during the game) could have been improved due to my body starting to fatigue. Other than that, my performance was very good with both sides being very impressed.

South Dartmoor Academy U13's V Torquay Grammar School U13's16/10/12

This game was going to be a rather easy one to referee but rather boring due to the skill level. The game started with the away side dominating every play which was reflected in the score throughout the game. I felt my communication in this game was very good as all decisions had to be very well explained to the players. However, I need to improve on my on the scrums and even more so when the players were as inexperienced as they were in this game. Despite that, both teams were happy with my performance and had no complaints about my performance.

Salcombe 1st's V Totnes 1st's 16/10/12

I was very apprehensive about this game, due to it being my first ever league 9 match. The game was also set to be difficult to referee due to both sides in the same position in the Devon 1 league table. The game started with both sides in very close battle with each other for the win which was seen throughout the game. I have majorly improved on the scrum area and the tackle area with very few penalties. However, my confidence may have let me down a tiny bit, not by the result or things that went on in the game but just made it abit easier for me, but this will only come from experience with games at a much higher level than I am used to (like this one) but I am more than capable to referee at this level and higher.

Newcross 1st's V Paignton 2nd's 03/11/12

I arrived to referee Newcross for the first time on a very cold, windy and dark Saturday afternoon. I had a fellow referee and the president of our referee society watching my performance in this game. The game started and there was a very close battle between both sides. The home team with close contact and the visitors were better with the wider and faster rugby. In the second half, I gave my FIRST RED CARD to one of the visiting players for punching an opponent. I felt I controlled the game well and also dealt with the red card very well by not letting it affect my confidence or performance which was especially noted by the assessor. On the other hand, I still have the tendency to be flat footed at times;. I need to be on my toes more and ready to move onto the next breakdown. However, the other referee told he had the same problem when he first started out and gave me some ways to help correct it.

CANDIDATE H

Surf Log

Physical Education

OCR Advanced GCE Unit G454

Log book cover sheet and authentication statement:

Outdoor and Adventurous Activities - Surfing

Centre Number		**Centre Name**	
Candidate Number		**Candidate Name**	

Log book element required	**Present? (please tick)**
Details and pictures of personal equipment and the reasons for taking it	
Explanation of quiver of boards and conditions suiting particular boards	
Local breaks surfed, best times/conditions to surf	
Health and safety principles	
Details of the code of ethics relevant to the activity	
Details of nutritional planning	
Details of 30 surfs (dates, times, conditions, tides, selected board)	
Evaluative comments in relation to each of the 30 surfs	
Photos of candidate surfing	
Record of results in a minimum of 2 BSA competitions	

Assessment Band Descriptor which log conforms to

Band 1: A detailed and comprehensive log containing all the prescribed information is present	
Band 2: A detailed log containing all the prescribed information is present	
Band 3: A detailed log containing most of the prescribed information is present	
Band 4: A log containing some of the prescribed information is present	
Band 5: A log containing little of the prescribed information is present	
Mark Awarded	Max 40

Authentication statement

I can confirm that this candidate has fully completed the activity as detailed in this log book, meeting all health and safety requirements, and that the material in this log book is the candidates own work.

Name of instructor/teacher responsible	

Signature		Date	

Surf Log

Equipment:

Boards:

5'7" x 19" x 2.25" This is an Adams surfboard and the model is a 'Tonka'. The Tonka offers a fuller and mover curvier template with its centre mark sitting slightly higher than standard. This board has a deeper single concave to maximise performance from the wider template and a slightly flatter rocker to increase speed over those weak sections. Also the fin cluster is slightly further forward to accommodate the wider tail section whilst still maintaining that tight in the pocket manoeuvrability. The Tonka Is a great all round board and suits the new school style of surfing, this board comes with a single concave and a thruster set-up as standard. It should be ridden 2-3" shorter than your standard shortboard. This is my favourite board for all round conditions and I use it in a variety of conditions from 1-4ft.

6'0" x 18 3/8" x 2.25" This is an Adams surfboard and the model is a 'p2. It has a single concave all the way through from the nose to the tale and has more rocker from nose to tail making this model better suited to better faster more hollow waves. This board is really good when the waves have a bit more power or are bigger as the board has more surface area allowing me to put more power into my turns without the fins sliding out or me loosing speed.

Wetsuits

1. Billabong SGX 5/4 for November to March when the sea is as its coldest, I wear this suit with 3mm wetsuit boots, gloves and hood to keep the heat in to maximise my surf session.
2. Billabong SGX 4/3 Between April and May when the water still has a chill to it, depending on the water temperature I might where boots.
3. Billabong SG5 3/2, I wear this between May and October as it keeps the wind off as well as keeping me warm so I can stay in the sea over long periods of time in the summer.
4. Billabong Zero Gravity board shorts for when I am in warmer climates such as Bali, they are flexible to allow me to perform better and seamless to stop rubs.

Hardwear:

1. Billabong contest leash
2. Farking cool water wax
3. EA Tech Flex Future Fins
4. Billabong Traction Pad

Surf Breaks

Crooklets Beach:

At low tide the waves are heavy and break very suddenly with lots of power as the swells come from deep water straight onto a shallow sand bank. This can produce good barrels when the sand banks are in the right place. As the tide moves up towards mid/high the waves peal very well with both lefts and rights which are very consistent due to continuous sand banks created by the rocks. The best conditions are 3-4ft of swell with a 10 second wave period and a 4mph Easterly Wind.

Summerleeze Beach:

At low tide it links up with Crooklets and is predominately as shut down as the sands banks as straight. However, between mid to high ride the river which runs out of the harbour and Cross Rock combine to produce a right hand rip-bowl. The movement of water out of the river causes the waves to stand up and the rocks make the waves break resulting in very good right handers. The best conditions are a 4ft+ swell at 10 seconds and above. The winds can vary as the waves always peel.

Spot M:

This is a world class left hand point break, meaning that the waves break along a cliff or stretch of rocks allowing the

wave to break the same each time. The outside section of the reef allows for good turns and then the wave bowls on the inside producing long barrels. This wave is very shallow an breaks on large rocks, only experienced suffers should surf here.

Beach and Water safety:

Lifeguard flags:

Red and yellow flags

Red and yellow flags indicate the area patrolled by lifeguards. These are the safe areas to swim, bodyboard and use inflatables.

Black and white chequered flags

Black and white chequered flags indicate an area zoned by lifeguards for use of watercraft such as surfboards and kayaks. Never swim or bodyboard in these areas.

Red flag

The red flag indicates danger. NEVER enter the water when the red flag is flying, under any circumstances.

Orange windsock

The orange windsock indicates offshore wind conditions. You should NEVER use an inflatable when the sock is flying.

Rip Currents:

Types of Rips:

Low energy rips are the most common and occur when waves are smaller or haven't changedin a while. They are usually fixed in place and sit in channels between sand bars and don't move much. High energy or flash rips are bigger and occur when waves have increased suddenly, or duringa storm. They tend to move around a bit and flow faster. Headland and fixed rips are often permanent and occur next to headlands and structures such as groynes and jetties. Rips are only dangerous if you don't understand what they are and you are not a good swimmer. They can carry you more than 100 m offshore in less than a minute and are the major cause of surf drowning's and rescues in Australia. However, surfers use rips to their advantage to help them swim out through the surf quickly.

Spotting a Rip

Since rips often sit in deeper channels between shallow sand bars, always spend 5-10 minutes looking at the surf zone for consistent darker and "calmer" areas of water that extend offshore between the breaking waves. Rips flow against the direction of the incoming waves so there's often a weird, disturbed surface compared to the rest of the surf. Rips also move things so look for moving sand, seaweed, foam and people!

How to get out of a rip

The most important thing is DON'T PANIC! The rip won't pull you under the water and drown you, it will just carry you seaward. Do not swim against the rip or else you will tire quickly. Either swim to the side, or let it take you out to the back of the surf and signal for help. Don't get caught in one in the first place! Make sure you understand what rips are and ALWAYS swim between the flags on patrolled beaches.

Surfing Code

SURFING CODE OF CONDUCT

- If you are new to the sport never hire a surfboard without first having a surfing lesson. (Given by a BSA qualified instructor)
- All surfers must be able to swim at least 50 metres in open water.

- Watch out for strong rip currents, rocky areas, rivers or groynes.
- Get 3rd Party Insurance through a surf club.
- Always wear a surf leash to prevent you from losing your surfboard (or bodyboard). For you your board is a safety device, to others it may be a lethal weapon.
- Have consideration for other water users including anglers, kite suffers, kayakers and bodyboarders.
- Never surf alone or immediately after eating a meal.
- Always return to the beach before nightfall.
- Never mix surfing with alcohol or drugs.
- Always wear a wetsuit when surfing in Britain (5mm thick outside summer and Boots/Gloves and Hoods).
- Be considerate of other beach users especially when carrying your board to and from the water.
- When paddling out avoid surfers who are riding waves.
- When taking a wave see that you are clear of other surfers. Remember, if someone else is already riding the wave you must not take off.
- Be environmentally friendly. Always leave the beach and other areas as you would wish to find them.

Nutritional Information

Surfers should eat a balanced diet just like any other person however surfers need to have more of curtains things to compensate for the large amount and diversity of the physical activity which they are doing. Serious or competitive surfers which train in the gym regularly need to be having lots of protein in their diet to repair and build up the muscle fibres which have been broken during muscular training. Competitive surfers should be carbo-loading 1-2 days before a competition so that they have plenty of energy stores to last the duration of the competition as there are little breaks between heats to consume nutrients and energy. Also suffers need to be drinking 3-4 litres of water a day as you do sweat loads whilst surfing even though you are wet and to stay hydrated in hot conditions.

Match Report

Date: 12/10/11

Location: Black Spot (Ireland)

Conditions: 4-5ft offshore wind

Tide: Low

Equipment: 6'0" Billabong Short board, 5/4 SG5, boots, gloves and hood

Summary:

The wave is a short heavy right hand reef brake which produces really good barrels and it was as good as it gets. I was anxious about going in as I hadn't surfed this spot before and it was a very critical wave however I was looking forward to getting barrelled in perfect conditions and pushing my self. I sat on the rocks for 10 minuets before paddling out to the line up.

For the first half an hour of the session I sat on the inside of the line up picking off some of the smaller, less heavy waves. This helped me to get used to the power of the wave and to see how it responded in these conditions. As my confidence grew I creeped deeper on the peak to be further into the barrel as I took of as well as selecting bigger and heavier waves. I had 1 bad wipe out and was held under for what felt like a long time but I came up and was fine, this gave me a rush knowing that I could put myself in such a challenging position and come out of it perfectly fine. This massively boosted my confidence to push my surfing and getting deeper bigger barrels through out the session. Just before our coach called us in I spotted a large set out the back and paddled into position, lining up with my marker on the beach. I let a few waves go past before taking off on a deep double up and pulled in. I stalled whilst in the barrel to stay in it as long as possible before coming out cleanly and riding the waves all the way to the inside so that I didn't have far to get out. This was the best wave I caught all surf and I was so stoked and so was my coach. It gave me the confidence in my own abilities to go out the next day and surf straight away at 100% taking the best waves.

Match Report

Date: 13/10/11

Location: Bundoran Peak (Ireland)

Conditions: 4ft offshore wind

Tide: Low

Equipment: 6'0" Billabong Short board, 5/4 SG5, boots, gloves and hood

Summary:

The wave is a A-Frame peak feed which means that it breaks in the same place each time with both a left and right hander. Its close to perfect, providing both barrel and turn sections so is an excellent place to train. It was cold and my muscles were stiff due to it being an early surf and the cold as well. I had to jog down to the beach incorporating short sprints and dynamic stretches to generate warmth to the muscles to reduce the change of injury and increase my performance as soon as I enter the water so that I don't have to take a few smaller waves to warm up.

The session was filmed by our coach and before we went in my goal was to tick off one of each of the 3 major manoeuvres; a roundhouse cutback, snap and floater, on both the left and right handers. The line up was also quite crowded so I needed to be specific with my line up positioning and my wave selection. I only had an hour to achieve my goals so had to really focus on my surfing abilities and flowing with the wave to hit the right sections making sure one of the 3 turns was functional. Luckily the wave was perfect for my goal and the first section pitched up every time allowing me to perform a critical, in the pocket snap. Unfortunately on the first few waves I only managed to do this one turn on both the lefts and rights as I was a little bit behind the next section. As I surfed the wave more I managed to be in turn with the sections and link floaters on the faster sections and cutbacks on the slower sections. This really helped me to think about my surfing in the right part of the wave so that it flowed, meaning in a competitive situation the judges would score me higher.

Match Report

Date: 14/10/11

Location: Bundoran Peak (Ireland)

Conditions: 4ft Medium onshore wind

Tide: Low-Mid

Equipment: 6'0" Billabong Short board, 5/4 SG5, boots, gloves and hood

Summary:

The wave is a A-Frame peak reef which means that it breaks in the same place each time with both a left and a right hander. It's close to perfect, providing both barrel and turn sections so is an excellent place to train. Today the wind was onshore which mean the lips were crumbling, perfect for fins out turns and radical manoeuvres as the section was easy to hit and release the board

The session was filmed by our coach and before we went in my goal was to work on fins free turns. He demonstrated me to the biomechanics of how to rotate and land these turns on the land so that I could get a kinesthesis of how it should feel when I get in the water. I had already had a short surf in the morning at the neighboring so was feeling loose and energized to go out and surf good.

For the first half an hour I feel on a lot of wave as I was experimenting with how far I could push myself as well as my equipment but then I came really close to landing one and it felt really good. I remembered this feeling for the next few waves and slightly decreased the power I put in and began to make these turns. I felt really good and started linking them with other functional turns such as cutbacks and floaters which I had been working on the day before. When I got out of the surf I really felt that my ability and increase from one session as I was making such difficult turns.

Match Report

Date: 15/10/11

Location: Tullan Strand (Ireland)

Conditions: 2ft light onshore

Tide: Low-Mid

Equipment: 5'7" Tonka, 5/4 SG5, boots gloves and hood

Summary:

This wave is very different to most as the swell wedges off the cliff bouncing back out into a left hand wedge. This meant that I would be surfing the whole session on my back hand. I hadn't surfed here before so I watched the conditions and line up for about 15 minutes before I went in to maximize the chances of getting better wave in a shorter period of time. Whilst I was watching the conditions I sat with my coach and disused my goals for the session and we decided that I was going to be working on the 'halo' maneuver which is the first big turn as soon as you take off on the wave. It was really fun, rip-able conditions and the light onshore wind added to this making the lips really good to hit. I did a short warm up consisting of a pulse raiser and dynamic stretches so I was loose when I entered the water.

The paddle out was short and simple as I could jump of the rock out the back and be straight on the peak in the right position to get the best set waves that were coming through. I started off the session by surfing complete waves to the beach so that I had some good clips on video before working on my goal of a first big powerful maneuver from take-off. I sat out the back for a couple of minutes to rethink my goal and then started off by getting a turn in as soon as I took off and wave by wave increase the power the I put into my turn and how critical it was. As I increased the power of my turn I sometimes fell as I was pushing too hard for the section, this made me tune in with my equipment and then managed to achieve my goal. Taking off straight into a critical turn. This is essential as it maximizes scoring potential in a competitive situation.

Match Report

Date: 26/11/11

Location: Bournemouth Pier

Conditions: 2ft, Strong Southwest wind

Tide: High-Low

Equipment: 5'7" board, 5/4 winter wetsuit with boots

Summary:

Before I surfed I observed the waves to see where to sit up so I can catch the most and the best waves coming through. This will give me more speed which creates more opportunities to practice better maneuvers.

I chose to ride the board I did because the waves lacked power due to the waves being wind generated, not proper ground swell. The board is smaller and wider compared to most of mine and this means that there is a larger volume to catch the small waves and the length mans it is quick and easy to turn. The 5mm wetsuit meant that more of my body heat is kept in from the movement I'm doing, this means I can surf for longer and stay warm.

My aims in this session were to perform the best and most radical maneuvers I could in the small weak conditions, and link each maneuver. At the beginning of the session I had several complete waves with good maneuvers such as fin blows and reverses however I wasn't putting maximum effort in because these waves were warm ups. The middle of the session was where I put in maximum effort to complete my goals. I achieved my goals as I had many waves that were complete and contained more than one good maneuver linked together. However towards the end of the session my performance levels rapidly decreased because I had become tired and the wind chill had made me cold.

The next session with similar conditions I will work on the same goals, as these conditions are similar to what its like in the summer competitions where I have to perform my best.

Match Report

Date: 28/11/11

Location: Milook

Conditions: 4-5ft, Offshore Wind

Tide: Low-Mid

Equipment: 5'7" board, 5/4 winter wetsuit with boots

Summary:

Milook is a point break which means that the waves break at the same place each time and peel with consistency over a rock bottom. After having surfed this break many times I didn't really have to look at the waves as I knew what to expect once I got in.

I chose to ride the board I did because I wanted to see how a small board performed in bigger waves. The board is smaller and wider compared to most of mine and this means that there is a larger volume to catch the small waves and the length means it is quick and easy to turn. However in the bigger surf I was unsure if it would hold on the bottom turns and just slide out. The 5mm wetsuit meant that more of my body heat is kept in from the movement I'm doing, this means I can surf for longer and stay warm.

My aims in this session were to catch the best waves as it is very crowded, if you can get the better waves it usually means you have a better surf. I also wanted to link at least two big power turns on each wave. This was easy to practice as each wave was fairly similar and allowed for the repetition of maneuvers. I achieved my goals asl got on to some of better waves that were coming through and had many waves that had some powerful turns. However towards the end of the session the wind changed direction and made the conditions poor and hard to surf, I also become tired and the wind chill had made me cold.

The next session with similar conditions I will work on the same goals, as this is the basis to be a powerful surfer.

Match Report

Date: 30/11/11

Location: Bossiney Cove

Conditions: 3-4ft, Offshore Wind

Tide: Low-Mid

Equipment: 5'7" board, 5/4 winter wetsuit with boots

Summary:

Bossiney is a hard beach to surf as the waves bounce off the cliff creating wedgy peaks which are hard to read and don't break in the same place each time. However, I've surfed here a lot and know what to look for in a good wave when sitting in the line up and when paddling into a wave. It is one of the better beach breaks in England as it produce hollow waves that barrel and have good air sections.

I chose to ride the board I did because it allowed me to take of under the lip straight into the barrels and easy to do airs. The board is smaller and wider compared to most of mine and this means that there is a larger volume to catch the small waves and the length means it is quick and easy to turn as well as airs. The 5mm wetsuit meant that more of my body heat is kept in from the movement I'm doing, this means I can surf for longer and stay warm.

My aims in this session were to make a barrel and land an air and I achieved this goal. The next session with similar conditions I will work try land more airs and get deeper into the barrels.

Match Report

Date: 20/2/12

Location: Soup Bowls (Barbados)

Conditions: 203ft medium Easterly Wind

Tide: Low-Mid

Equipment: 5'7" Tonka, Zero Gravity Board shorts

Summary:

We got up at first light which was about 5.30 as that when the tides and conditions would be best and the winds lightest. The house we were staying in was right on the beach in front of the right hand reef break and our balcony looked straight onto it. This was perfect as before I went in I could do my warm up and stretches on the balcony and watch the conditions. there was still a little bit off onshore wind making the peaks shifty so it was good to watch and see which section of the reef the waves were breaking best on. This was my first surf in a new country and our coach, British legend Russell Winter, said my aim in this session was to adjust to surfing with out a wet suit and get used to how my boards feel in different water as well as the power of a new wave.

I was so excited to go surf as it's a world class reef and the waves looked so fun. Although it was just a free surf to adjust to the conditions in my mind I was still pushing my self to surf the best I could so that i'm always surfing to the best of my ability. I was being filmed through out the surf so I wanted to get some good waves on camera to go towards a video. I had many good waves linking turns and training to do some airs, pushing my surfing as hard as I could. I was really positive about being in a hot country and in perfect waves and this definitely helped raise my performance. I surfed for about 2 hours trying to vary the turns I did on different sections to see how my board and equipment responded and how it flowed on the wave so that I could make changes for further sessions.

Match Report

Date: 21/2/12

Location: South Point (Barbados)

Conditions: 203ft medium Easterly Wind

Tide: Mid-High

Equipment: 5'7" Tonka, Zero Gravity Board shorts

Summary:

We didn't have to get up early to surf here as the tide and conditions were better later on in the afternoon which meant we had a relaxing morning to stretch and go over the video from the day before with the coach. It was a short drive from the house to south point and once we got there we went straight in as we hard warmed up and stretched in the house. Just before going in me and the coach sat down and watch the conditions. It was short wedgey right hand peaks with a perfect end section to do an air or reverse on so we talked over the technique for airs and reverses. After going through the technique he told me that this is what he wanted me to work on in this session. I was really excited to be working on this as I loved aerial surfing and its an aspect of my surfing which needs to be improved.

On the first 3 waves I didn't work on on airs or reverses I just had a few relaxed turns to get my feet into the wax and get into rhythm. Once I found my feet and got into the waves and started working on my goals. I first worked on straight airs with out a rotation which are simple but it was a stepping stone to get ready for adding the rotation. I next tried normal reverses to work on the rotation and landed to good ones after many attempts. I worked on this for the rest of the session to improve flowing out of the rotation. Next session I'm going to them working on rotation in the air.

Match Report

Date: 25/3/11

Location: Widemouth bay

Conditions: 4ft light Easterly Wind

Tide: Low

Equipment: 6'0" P2 Surfboard, 5/4 SGX wetsuit, boots and hood

Summary:

It was my first surf of the day and I had been exercising the day before so was feeling stiff. Before I went in I did a 20 minute warm up which consisted of dynamic stretches as well as lunges and some light jogging. After this I got changed on the verge of the grass at the top of the cliff allowing me to see the whole beach and see where the good banks are as well as the rips. The surf was quite big for Widemouth and not really holding on many of the banks but towards the far corner there was an inside rip-bowl where the waves were reforming into a short hollow left. This was the best place on the beach and chose to go in there. I rode my 6'0" P2 as it's my all-round short board that goes good in most conditions. In this session I wanted to work on powerful turns in the critical section of the wave as my back hand is the strongest aspect of my surfing, at the same time there was a few barrels coming through so I wanted to also look out for these sections and try to work on my back hand barrel technique.

The paddle out was easy and I was ripped straight on to the peak where there was only one other surfer so I pretty much had my selection of the waves. The first few were just warm ups to get used to the speed of the wave and how it breaks. On these I managed to get a few smaller turns but didn't surf 100% as I didn't want to get tired for when I was in tune for the conditions. In the middle of the surf I worked on my goal and succeeded in getting powerful turns in the critical part of the wave as well as on some waves getting 2 or 3. I was happy with this and turned my focus to find some barrels; this meant I was going to have to be more selective with my waves. I pulled into a few shut downs but forwards the end of the section found a perfect peak and pulled it in and made it out cleanly. All my goals for this session had been achieved so I got out to save my energy for another surf later in the day.

Match Report

Date: 26/3/12

Location: Summerleeze Beach

Conditions: 3ft light easterly wind

Tide: low

Equipment: 6'0" P2 surfboard, 5/4 Billabong SGX wetsuit, boots and hood

Summary:

I had heard that the sand bank had been good at low ride and the conditions were right this day. I watched for about 15 minutes before I went in to see which waves broke the best and where to line up so that I was in position to get these waves. The waves where peeling left but heavy and barrelling so my goal in this session was to practice my backhand barrel riding technique and try to ride as long as I could. There were many closeouts as well so I wanted to be selective with my wave choice and try to make it out of some of the barrels. I rode my 6'0" P2 because it allows me to paddle into the wave quickly and it also holds well in fast waves, I was cautious not to break my favourite board in the heavy conditions.

At the beginning of the sessions I had a few wipe-outs as I was trying to get used to the very quick and steep take offs on my backhand nut quickly got the hand of it as I was watching other good surfers which had surfed the bank the previous day. In the middle of the session a good peeling wave came through and I fully committed to it, I pulled into the barrel and kept my line, inside I thought I wasn't going to make it and contemplated bailing, however I kept my line and came out. This was one of the best barrels I've had here as it was long and intense. I got out after that as I know my sessions wouldn't get any better. Next time the conditions are similar I'm going to carry on practising my back hand barrel riding technique.

Match Report

Date: 26/3/11

Location: Crooklets Beach

Conditions: 4ft light Easterly Wind

Tide: High

Equipment: 6'0" P2 Surfboard, 5/4 SGX wetsuit, boots and hood

Summary:

I had already been surfing earlier in the day at low ride and was in rhythm with the waves after having a good surfing and working on specific goals. This time the waves had increased with the pushing tide so the waves were really good. I rode the same board as it went good in the previous session but I decided to have a 'free surf' and enjoy the good conditions. Before I went in I watched the waves to see when the best banks are and how often the good waves came through.

I was lucky with the paddle out as I didn't have to duck dive once, this but me in a good rhythm straight away as well as making me feel positive. The first few waves I had weren't very good as I wasn't in the right position; however, I found a rip where the waves were peeling into and paddled out in it to put me right in the peak where the waves had the most power. The first wave I had spotted a good end section and raced the wave for an air. I boosted quite high without a grab and landed it cleanly. This gave me positive reinforcement so that I know the kinesthesis next time I'm faced with a similar section. For the rest of the surf I worked on having a powerful manoeuvre on each wave as I had already landed a technical air.

Match Report

Date: 23/3/11

Location: Wonson

Conditions: 4ft light Easterly Wind

Tide: Mid to High

Equipment: 6'0" P2 Surfboard, 5/4 SGX wetsuit, boots and hood

Summary:

I had already surfed this day so didn't need to do a warm up but I did do a light jog just to get the blood circulating around my body. Wonson is a right hand reef break so the waves break in the same place each time and I've surfed it many times before and knew where to line up on the peak and where the safe place was to paddle out is. I was with my friend who is a very good surfer on the men's UK tour and he gave me a few pointers to work on making my turns more powerful so this is what I was going to work on in this surf.

The first few waves I had in the session were the best I had as I was pumped up from the pointer and keen to surf as the waves were so good. My 3rd wave was by far the best as I came straight off the bottom into a powerful snap and followed it up with 2 round house cut backs and finished with a floater on the end section. For about half an hour I didn't catch any good waves as the tide was changing and the waves didn't have the power a sit was moving onto the inside feed. When the tide had settled a few little barrel started to break and on one of the bigger sets of the day I stalled on the bowl section and managed to get a good barrel. This was my last wave of the session s it was getting dark. I was pleased with my performance in this session and put it down to watching and surfing with such a good surfer, it helped my raise my ability.

Match Report

Date: 27/3/12

Location: Widemouth Bay

Conditions: 3-4ft light Easterly Wind

Tide: Low-Mid

Equipment: 6'0" P2 5/4 SGX Wetsuit and boots

Summary:

Prior to this session I had already been surfing as part of a coaching session with a British Team coach for an hour and had already got used to the conditions and was already warmed up. However, I did still watch for about 5 minutes whilst I was getting changed to see of the conditions had changed and if the best wave were still coming in the same place. I moved down the beach a little compared to where I had been surfing as the ride had filled in a little bit and moved onto a different part of the sand bank.

During the session which was only an hour I worked on what we had been practising during the coaching session which was splitting my surf into 20 minute blocks, the same as a heat. Each block I worked on a different aspect of my surfing. Firstly I worked on getting 2 major maneuvers into each wave that I took off on, this made me be selective and patient with my waves so that I picked on which allowed me to achieve this. I only had 3 waves during this time as there were many people in the water waiting for waves but I managed to succeed and get 2 or more maneuvers on these waves. For the second block I worked on 1 maneuver waves but making these as powerful or radical as possible. I got more waves in this block and managed to have 2 waves with a good powerful turn on and 1 radical maneuver. I was tired after this so allowed my self to have a free surf during the last 20 minuets to enjoy the good conditions and have fun.

Match Report

Date: 28/3/12

Location: Crooklets beach

Conditions: 1-2ft Medium Northerly Wind

Tide: Low

Equipment: 5'7" Tonka, 5/4 SXG Wetsuit and boots

Summary:

It was a hot day and we had been down to the beach for a while waiting for the conditions to get better but unfortunately it was just a shut down on the low ride bank but I went in anyway to cool off and use it as exercise. I rode my Tonka to try get as much speed as possible when paddling into the small mushy waves and keep my speed whilst on them. Even though it was just a shut down I went in with a goal in mind and this was to still try to land one turn/ maneuver on each wave I went on.

Most of the waves I got were shutdowns as I took off on a lot of waves which come through hoping hat I found one which peeled enough for me to get a small turn or get some speed for a floater. As the tide pushed in a little a little rip bank formed which held the waves up giving me enough time to get 1 and possible 2 turns. When I paddled down to the bank I found a corner of a wave and managed to get a wave which had a tapering wall allowing me to do a cut back and follow it up with a fins out snap. The wave after was faster but held up enough to let me do a lip line floater. For about half an hour after this I was ripped out of position however managed to find a left which let me do 2 quick little snaps before it shut down. After this wave I got out to save me energy for the day after as it would be better.

Match Report

Date: October 20th

Location: Thurso, Scotland

Board: 5'11 Adams P2

Wet Suit: Billabong SGX 5mm wetsuit, boots gloves and hood

Conditions:

The wave was Thurso East which is a right hand point break which breaks at all rides and offers long rides with both barrel and turn sections. This day it was 4ft and strong onshore creating a strong rip down the point so paddling endurance was vital. The wind also made the waves lumpy so wave selection was also import to make sure you picked a wave which was going to offer a long ride.

Analysis:

I was at Thurso for a UK Pro Surf Tour Pro Junior contest which was to take place the next day so this sessions was mainly to suss out the line up and how the waves break as I had never surfed this wave before. Before getting paddling out I sat in the car which looked over the break to see where about on the reef the best waves were breaking and also to see where a safe and easy entry to the line up was. The was so important as the next day in the competition I only had 20 mineuts to get the 2 best waves possible. Once I was out in the water I took special attention to land marks on land to see where the best waves were as this would give me an advantage the next day to be able to paddle straight to this area. After getting a few good waves where I felt comfortable on the 5'11 board I was riding I got out to try another one with a little more rocker and decided that in the onshore conditions I preferred the one I started on as it gave me more drive over the flat sections. I didn't surf for too long as the cold water easily drains your energy and I wanted to be in top form for the even the next day.

Match Report

Date: October 21st

Location: Thurso, Scotland

Board: 5'11 Adams P2

Wet Suit: Billabong SGX 5mm wetsuit, boots gloves and hood

Conditions:

The waves were the same as the day it was 4ft and strong onshore creating a strong rip down the point so paddling endurance was vital. The tide was also on the way out making the rip worse and the wind also made the waves lumpy so wave selection was also important to make sure you picked a wave which was going to offer a long ride.

Analysis:

I had a good few heats in the early rounds of the Pro junior and Under 18 divisions and my equipment was leaving great and my confidence grew with each heat win. By the semis finals of each I was feeling in top physical condition, my training over the previous months had paid off. The final of the Under 18 division was really hard as the waves were really inconsistent. There was one set at the beginning of the heat and I managed to get one of these waves, getting a high score. However, I still needed another high score to win. I ended up in a bad rhythm paddling for smaller inside waves due to the lack of sets. This didn't give me the ability to perform big, critical manoeuvres and I struggled to get a high back up score. I ended up 3rd which I was disappointed with but looked forward to the Pro Junior final in the next heat. I went into this heat full of confidence as the experience in the previous final gave me the advantage, knowing to sit and wait for the bigger set waves as this would give me the best scoring opportunity. I started off with @ good set waves and I was in the lead. The long wait between sets was now what I wanted and I made my self deepest so if a set wave did come, I had priority. With only a few mineuts remaining I sat on the rest of the competitors to make sure they didn't catch a wave. The horn went and I was ecstatic, I had just won my first ever Pro Junior event.

Match Report

Date: 20th Dec 2012, Morning 6-7am

Location: Santa Teresa, Costa Rica

Board: 5'11 Adams P2

Wet Suit: SGX Board shorts

Conditions:

The waves were 2-3ft with a gentle off shore and a dropping tide. The tide was still high making the waves peal both left and right, however as the bank was full the waves were spilling with little power.

Analysis:

This was my first surf in Costa Rica and in board shorts so firstly I was just getting used to the feeling of being warm and free in the sea, where as back home the water had been 6 degrees compared to 27 degrees and I had also been in a 5mm wetsuit. I wanted to feel out my equipment for the rest of my 2 week trip now as I was lighter and more flexible. I was instantly buzzing as I was in Costa Rica and feeling that the surf was going to be great fun. The first few waves were easing into the session but I was still going to push my self, working on flowing carves and cut backs as the waves didn't offer critical lips. I had some good waves but slipped quite a few times as I had the wrong wax so I made sure that I got harder wax that would give me more grip on my board and enable me to push harder through my turns. Although the waves were fairly fat I had one good double up and I did a big fins-out reverse which I came so close to riding out of and it felt so good. I sat out the back after this wave to remember the kinesthesis of the maneuver so I knew what body movements to do when another similar section came up.

Match Report

Date: 20th Dec 2012, Afternoon 2-4pm

Location: Santa Teresa, Costa Rica

Board: 5'11 Adams P2

Wet Suit: SGX Board shorts

Conditions:

The waves were 2-3ft with a medium onshore wind and a pushing tide just off of low. This low tide combined with the push of the ride made the waves much power powerful compared the the morning session and the onshore wind created fluffy lips which were perfect for airs and fins out maneuvers.

Analysis:

My aim was much different to that of the morning as now I had the opportunity on almost every wave to do a air or fins out maneuver as long as my wave selection was good. I had changed my wave from the morning session allowing me to grip my board better so I could rotate on my airs. The first few airs I tried were small to make sure I had the right technique however I wasn't keeping my body weight over my front leg and I knew this and it became frustrating. To make sure I didn't become frustrated I took a break from airs to work on the halo maneuver which is hitting the first turn on the wave straight from the take with as much power as possible. This is vital as it scores the most points in a competition. Its good to work on this as if you fall you are still out the back and it isn't far to paddle back out. 2 of my turns I managed to link straight from my first bottom turn with another finishing maneuver and in my mind I gave myself two 7.0 rides which I was happy with and went back to working on airs. I had several poor attempts but re composed my self out the back ans Landed a good, clean inde grap air and got out whilst I was surfing good to end on a high for next sessions where I was going to get my airs higher.

Match Report

Date: 17th February 2013

Location: Cordarama Beach, Portugal

Board: 5'11 Adams P2

Wet Suit: 4/3 Billabong SGX

Conditions:

The ride was dropping out with about 2 feet of swell, however the swell was increasing so the waves had quite a bit of push to them. Low tide was about 2pm and we arrived at the beach about 8am. With the beach break being shallow the waves were powerful and wedgy but I had to be selective as many of the waves were closeouts.

Analysis:

This was my first surf after arriving in Portugal the night before. Even though the surf conditions weren't amazing I went into the session with a really strong positive attitude as I was really happy to be in a different country with the water being warmer than it was at home and for the waves to be more powerful. My main aim for this surf was just to get used to how my board felt in the different waves and how I felt being more flexible in a thinner wetsuit. Although these are small differences from what I would be doing at home they can have a big effect on how I surf so it was vital to prepare myself for the rest of the trip. I wasn't going too big with my maneuvers but just getting my flow together. I was pleased to get 2 good left handers each with 2 snaps on. After about an hour I came out to save my energy for the rest of the day. I was happy with my performance and confident that I was that I was going to be in good form for the rest of my trip.

Match Report

Date: 17th February 2013

Location: Punta Point Break, Portugal

Board: 5'11 Adams P2

Wet Suit: 4/3 Billabong SGX

Conditions:

There was about 3 ft of swell hitting the shallow left hand point break creating waves around the 2-3ft range. The tide was mid to low and this made the waves run with a bowl, perfect for criticial maneuvers. The wind was light enough to moderate off-shore so this made the faces of the waves smooth allowing for easy rail to rail transitions.

Analysis:

I sat and watched the lineup for about 15 mineuts prior to paddling out into the line up so I could determine which waves were best and how many were in a set. The second waves of the 4 wave set was best as the first wave would draw some of the water off the reef making the second wave break faster and tighter to the reef. I did a light warm up and paddled out with this in mind, trying to hit the first section. My aim in this session was to link 2 critical maneuvers together with no pumped in between whilst keeping my flow and speed, as this would score the highest points possible in a competition situation. My first 3 waves were warm up to feel the board and from this I could concentrate with my aim. I had a few waves where I fell off but it was important that I didn't let these bad waves get in my mind and put me into a bad rhythm. I sat out the back for 2 minuets to gain some energy and focus my mind on how to achieve my goal, by being relaxed was going to bring out the best results in my surfing. I had 3 really good waves in a row that I was happy with and all of them were on video s I got and and had a look to see what they looked like and how I could further improve them for my next session.

Match Report

Date: 19th February 2013

Location: Afrana Point, Portugal

Board: 5'11 Adams P2

Wet Suit: 4/3 Billabong SGX

Conditions:

The waves were about 6-8ft with a really strong swell period and the ride was mid going out to low which make the waves stand up more on the point as they hit the shallower shelf.

Analysis:

My main aim in this session was to improve my confidence in bigger more critical waves. I watched the line up for about half an hour before paddling out. This is important to see where the bigger sets close out and where the running waves hit the reef. I can line up this point with a marker on the cliff and keep in this position out in the water to enable me to get the best waves. In terms of maneuvers I was going to focus on big carves and linking several of the on each wave as it allowed for this. The first 2 waves I had didn't have any major maneuvers on as I was seeing how my board went and how the wave felt, then I started to link some softer turns together. Driving of the bottom straight from take off into a rail carve, then straight down and up again into another suitable maneuver. I managed to get 2 great waves with in half an hour before it became too dark and I had to get out.

Match Report

Date: February 27th, 2013

Location: Porthleven, Cornwall

Board: 5'11 Adams P2

Wet Suit: Billabong SGX 5mm wetsuit, boots, gloves and hood

Conditions:

The wave is a shallow reef break with both left and right handers which have turn and barrels available. This day it was 3-4ft with light off shore winds and a pushing tide from low. Perfect conditions for Portheleven.

Analysis:

I waited for about 3 hours for the incoming tide which brought th South Westerly swell with it. During this time I was keeping warm as it was very cold and I didn't want to loose any energy. Once I saw some consistent sets coming through I suited up and walked down to the cliff to jump off the rocks to save the long paddle out from the harbour. I started on the right hand side of the reef on a peak called restles where there were some random barrelling peaks. I got some amazing barrels and tried to work and pressing my arm into the wave to stall and stay in the barrel for longer. The wave had an easy take off enabling me to think about it each time. I managed to get one really long deep barrel on my back hand and my forehand so I paddled over to the main peak to try and link some turns with barrels. On the way I picked up a small leg into a crack, twisting my knee. I had to be lifted out of the water and this ended my session. However I was really happy with the session and pleased with my performance apart from my injury.

Match Report

Date: March 16th, 2013

Location: Crooklets beach, Cornwall

Board: 5'11 Adams P2

Wet Suit: Billabong SGX 5mm wetsuit, boots gloves

Conditions:

It was 2-3ft with light onshore wind and the tide was pushing up from low. I surfed the right hand sandbank off of wrangles rocks.

Analysis:

This was my first surf back after my knee injury so I was really happy and keen to be back in the water. The conditions were perfect as I wasn't to big and going to put my knee under much strain. Although I had been given the all clear by the physio I was was really careful and wore a knee brace under my wetsuit. In this session I had no intention to go out and try to do big turns or airs as my knee was my main priority and I didn't want to cause any further damage. I just wanted to get used to standing up and making smooth top to bottom, arching turns so that my knee could get used to surfing movement again. After about 30 mins into the session I started to add a little more power through my turns to see if my knee could cope with it. With critical end section turn I would carve to the bottom of the wave to avoid any impact. Mt knee was feeling good but I didn't want to push it too far and got out after 45mins, however my session didn't finish there. Once I was out I did a 14 mineut stretching routine to make sure my knee did stiffen up. I was very pleased with how the session went and how my knee was feeling and looked forward to getting in the water again.

Match Report

Date: March 17th, 2013

Location: Crooklets beach, Cornwall

Board: 5'11 Adams P2

Wet Suit: Billabong SGX 5mm wetsuit, boots and gloves

Conditions:

It was 2-3ft with light onshore wind and the tide was pushing up from low. I surfed the right hand sandbank off of wrangles rocks.

Analysis:

As the conditions were the same as the day before I already knew which bank and a what time I was going to surf it at to get the best waves. The right hand back today was a little better than the day before, this could have been due to a slight shift in the sand. The waves bowled up a bit more making the sections a little more critical. I was still taking it easy due to recently recovering from my knee injury but after feeling good the day before I decided to try and aim higher with my goals and see if I could do some fins out turns with the waves being better. To do this I was going to have to drive harder and deeper from the bottom of the wave, compressing more into my bottom turn which would test the strength of my knee. I started off with shallower bottom turns and progressively made them deeper to hit the lip more vertically. I managed to get 2 solid turns on one wave and one good one on an end section. My knee started to feel tired and I got out to make sure I didn't damage it further. I still had stretching to do once I was out but I also went to the gym later that day to work on strengthening my knee.

Match Report

Date: March 25th, 2013

Location: Crooklets Beach, Cornwall

Board: 9' Adams longboard

Wet Suit: Billabong SGX 5mm wetsuit, boots and gloves

Conditions:

1ft light off shore wind and a mid tide dropping out and a decreasing swell

Analysis:

The waves were pretty much flat and the swell was decreasing even more so this meant that there was almost no power in the waves. I took a long board as I hadn't done much exercise and I really wanted to try and keep my surf fitness up as I knew that there wasn't going to be too much swell over the next few days. Whilst out on the long board I treated it more like a fitness session by catching a wave and then paddling to the other end of the beach before I could catch another wave. Even though I was riding a completely different board I still had aims. I wanted to make sure that my pop up technique was the best it cold be and being on the long board enabled me to really focus on speeding it up as the sturdy base wouldn't move to much. I also think that its good to have fun every now and then and ride different boards so that you don't become stuck in the mind set of performance surfing. So I took this opportunity to just have a relaxed surf session and enjoy it as the was nobody else and and no pressure to be doing big, critical turns.

Match Report

Date: March 24rd, 2013

Location: Fistral, Cornwall

Board: 5'11"Adams P2

Wet Suit: Billabong SGX 5mm wetsuit, boots and gloves

Conditions:

2-3ft light off shore wind and a low, neap tide pushing in.

Analysis:

The swell had dropped considerably compared to the day before but it was still really good. The low tides banks remained the same making the waves punchy so there was still the opportunity to get some high scoring waves. As the waves were smaller I chose to ride a squash tail board rather than a round pin which I had the day before. The squash tail would give me a little bit more drive off the bottom but be less loose. I set out to do practice heat situations time 20 minuets on my watch and wanted to get at least and 10 point total. I got in rhythm early and managed to get get 2 really good waves straight of the back, a 6.5 and a 7.0. So for the rest of the time I sat and waited for a wave that would better my 6.5 but it didn't come. It is important to be selective in a competition as you don't want to take off on waves which cant improve your score on as it doesn't gain you any advantage and leave the other surfers opportunity to get a good wave. I then had a half an hour expression session, this is where I didn't have to think about my surfing and just try what ever came into my head from airs to turns. This is where new maneuvers can be created. I managed to get the kinesthesis of a big slob air reverse and came close to landing and knew how I would have to rotate next time I tried them.

Match Report

Date: March 23rd, 2013

Location: Fistral, Cornwall

Board: 5'11"Adams P2

Wet Suit: Billabong SGX 5mm wetsuit, boots and gloves

Conditions:

5-6 light off shore wind and a low, neap tide pushing in.

Analysis:

The waves were as good as it gets! It was big and clean and the low tide at Fistral meant that the waves were peaking up and pealing in both directions. The tides were neap meaning that there was the lowest amount of movement, this was an advantage as the waves would break on the same bank for a longer period of time and the lack of water movement mean less powerful rips. Because the conditions were so good it enabled me to go out and practice all types of maneuvers and most importantly have fun. I didn't focus so much on my performance as just by having fun I was surfing at a high standard. The big bowls made it best for carve turns which fit in well and the end sections wee good for all types of airs and reo's so I could practice a variety of these. I came out of the surf feeling really positive with my performance and happy with the session. I learnt that I surf best when I'm enjoying myself and that I need to implement this into a competitive situation.

Match Report

Date: March 19th, 2013

Location: Summerleze beach, Cornwall

Board: 6'0"Adams P2

Wet Suit: Billabong SGX 5mm wetsuit, boots and gloves

Conditions:

It was 3-4ft with a medium onshore wind and the tide was pushing from low. I surfed the right hand sandbank off of cross rock in to the river.

Analysis:

The swell and wind had picked up making the other beaches unsurf-able as the waves were closing out. The food thing about summerleze is that the waves always peel into the river so it can be almost guaranteed that there will be sections to do turns. I still wanted to practice what I had been working on the day before but it was going to be hard as there were a lot of lumps in the wave. I changed my goal to working on flowing as much as possible instead of bouncing through the fatter sections. To do this I would have to use the same technique was generating speed the day before on the smaller wave but in the top half of the wave to make sure I don't get bogged down in the slow part of the wave. I had some good waves that doubled up and I managed to link some good carves but made sure I took off some bad waves to practice the rail to rail linking.

Match Report

Date: March 18th, 2013

Location: Crooklets beach, Cornwall

Board: 5'7"Adams P2

Wet Suit: Billabong SGX 5mm wetsuit, boots and gloves

Conditions:

It was 1-2ft with light offshore wind and the tide was dropping from high. I surfed the right hand sandbank off of cross rock.

Analysis:

This bank usually work when the wave are really big however the sand had built up around the rocks and on the dropping ride it made the small swell surf-able as it made the wave peal constantly. I rode a smaller wider board to give me more speed when paddling into the waves, its also more responsible top to bottom in smaller conditions. My main aim in this surf was to work on generating speed. Do do this best the board has to be pumped rail to rail displacing water which creates speed, stiffer fins can help as they push more water. On my waves in the first half an hour I was pumping down the line with out doing any turns just to try and get as fast as I could. I then went on to develop this by drawing out one big turn at the end of each wave, using all the speed I had to make surf that the turn was as powerful and smooth as possible. For my next session I wanted to continue working on this but link several turns together whilst maintaining speed. This would make my surfing look better and my waves score higher in contests.

2013 – Qualified for British Junior Squad

2012 – Finished 2nd on the U18 UK Pro Surf Tour

2012 – British Surf Championships Under 18's 3rd

2012 – Thurso Open Under 18's 3rd

2012 – Thurso Pro Junior 1st

2012 – British Schools Championships U18's 1st

2012 – Parking eye PJR 4th

2011 – Newquay open under 16's 1st

2011 – British Junior surf champs under 16's 4th

2011 – Jess Memorial under 16's 2nd

2011 – Volcom Sidfish under 18's 2nd

2011 – Ripcurl Grom Search under 16's 4th

2011 – ISA World Junior Championships 25th

2011 – National Trust Pro Junior under 16's 2nd

2011 – National Trust Pro Junior under 18's 2nd

2011 – European Volcom Qualifying Series 4th under 18's

Qualified for the 2011 British Team in the April 2011 World

Junior Championships in Peru

2010 – British Schools Under 16's 3rd

2010 – UKPST – Freserbrugh – under 16s 2nd

2010 – Volcom Sidfish under 18's 2nd

2010 – Billabong British Juniors under 16's 2nd

2010 – Ripcurl Gromsearch under 16's 3rd

2010 – UKPST Gul Night Surf, under 16's – 2nd

2010 – Quiksilver King of the Groms – 3rd

2010 – Uk Pro Surf Croyde Open – under 16's – 2nd

2010 – English Nationals under 16's – 4th

2010 – Bournemouth Surf Festival – under 18's – 1st and Open – 3rd

2009 – British under16 boys team member for 2010 world surfing games

2009 – 1st Billabong British Junior Championships under 16's

2009 – Quiksilver King Of The Groms European Final

2009 – 4th UKPST surf relief under 16s

2009 – 1st Quiksilver King Of The Groms under 16's

2009 – 3rd Rip Curl Grom Search under 16's

2009 – 2nd Rip Curl Grom Search under 14's

2009 – 5th UKPST Saltrock open – under 16's

2009 – 1st Bude surf classic – under 14's

2009 – 1st British schools championships – under 14's

2009 – 1st Fistral junior fund raiser – under 16's

2009 – 1st Fistral junior fund raiser under 14's

2008 – 1st Jesus Surf classic – under 14's

2008 – 1st Quiksilver King of the Groms – under 14's

2008 – 4th Mosquito Groms

2008 – 4th Ripcurl Grom search under 14's

2008 – 5th Headworx English nationals under 14's

2007 – 1st British Schools championships under 14's

2007 – Ranked no2 in UK pro tour (BPSA), under 12's

2007 – South Coast Championships, 2nd under 18's – Isle of Wight

2007 – 2nd Billabong British Junior Championships under 12's

2007 – 2nd Hot Tuna Summer of 69 contest Widemouth

2007 – 3rd Harlyn Classic under 18s

2007 – 1st Watergate Bay Classic under 13's

2007 – 3rd Fat Face Nightsurf Contest

2007 – 3rd Rip Curl Gromsearch, under 12's

2007 – 7th Rip Curl Gromsearch under 14's

2007 – 3rd, English Nationals, Watergate Bay

2007 – 2nd South Coast Deep freeze, Boscombe

2006 – 4th English Nationals, Watergate

2006 – 3rd Rip Curl Grom Search, Sennen Cove

To whom it may concern, July 1st, 2011

My name is XX and I am the head coach of the Great Britain Junior Surf Team and I am writing this letter in regards to XX is presently one of our team members whom I have known for almost a year now. Through my current position and having just spent two weeks in Peru with Miles at the World Junior Championships, I believe I am in a good position to professionally evaluate and recommend his current surfing abilities and his long-term career potential.

I have found XX to be very easy to work with and quite coachable. He has been eager to learn and quick to apply the things I have sought to instruct him in concerning his surfing abilities and overall character. While in Peru he carried himself extremely well in interactions with his teammates as well as his peers from the world. He is very likeable and encouraging towards others with his words. At the World Junior Championships he received the "coaches" award for "Most Inspirational Surfer" on the Great Britain team. He won this aware through the combination of his positive attitude, influence on his teammates, and for his outstanding surfing throughout the competition.

In regards to his surfing abilities XX presently one of the top 25 junior surfers in the world! His performance in the water in Peru was outstanding. He was focused, well prepared, and highly competitive in all of his heats. From what I have seen, I believe XX has the potential to become one of the best surfers to ever come out of Great Britain. He has the drive and the whole package to put it together on a world-class level. I am very excited to see what he is going to accomplish in his future, especially over the next two years through his involvement with the Great Britain Junior Team.

Beyond his character and surfing abilities, there is one other aspect to XX I believe is worth noting and it is in regards to his marketability for any current or future potential sponsors. XX has the look of a surfer yet distinctively an English surfer. He carries himself with class, loads of personality, and he has the surfing ability to back it all up. XX extremely marketable for who he is right now; however, I believe that if he stays on course there is an unlimited upside for how far he can go in representing his sponsors and Great Britain in the sport of surfing.

I look forward to working with XX in the future and specifically over this next year as the head coach of the Great Britain Junior Surf Team. Our program is on the rise; we have a bright future and an increased expectations and I am excited to have XX as a big part of it! If I can be of further assistance in regards to XX please feel free to contact me at XX. Thank you for your time and consideration concerning the surfing career of XX.

All the best,

Head Coach Great Britain Junior Surf Team

CANDIDATE I

Horse Riding (Show Jumping)

Physical Education

OCR Advanced GCE Unit G454

Log book cover sheet and authentication statement:

Outdoor and Adventurous Activities - Equestrian – Cross Country, Dressage, Eventing, Show Jumping

Centre Number		**Centre Name**	
Candidate Number		**Candidate Name**	

Log book element required	**Present? (please tick)**
Evidence of candidate's competitive record in the previous 12 months	
Details of the test/course undertaken for the assessment	
Details of personal equipment and the reasons for using it	
Details of horse's equipment and the reasons for its use	
Discussion relating to safety principles applied	
Details of any code of ethics/conduct relevant to the activity	
Details of course/test planning together with relevant safety measures	
Evaluative comments in relation to the course/test undertaken for assessment	

Assessment Band Descriptor which log conforms to

Band 1: A detailed and comprehensive log containing all the prescribed information is present	
Band 2: A detailed log containing all the prescribed information is present	
Band 3: A detailed log containing most of the prescribed information is present	
Band 4: A log containing some of the prescribed information is present	
Band 5: A log containing little of the prescribed information is present	
Mark Awarded	

Authentication statement

I can confirm that this candidate has fully completed the activity as detailed in this log book, meeting all health and safety requirements, and that the material in this log book is the candidates own work.

Name of instructor/teacher responsible	

Signature		Date	

Personal Equipment for the course and the reasons for taking it

Riding Hat

The hat protects the head in the event of a fall. It should be fitted by a professional to ensure that it fits the riders head properly in the event of a fall. The hat must have a 3 point fastening and be approved to the BHS standards. For example, PAS 015.

Riding Boots

They have a flat sole with a small heel. This enables the rider to keep their heels down as the soles are flexible and if the rider falls of their boot is less likely to get stuck in the stirrup due to the small heel preventing the foot from going through the stirrup.

Spurs

Spus are used to encourage the horse around and course and to help the rider to keep a good pace/rhythm. They attach around the riding boot under the heel. They should only be used by riders who are using them under guidance, are experienced and riders must have a still leg.

Whip

The rider carries a whip to encourage the horse around the course. For example, if a horse is spooking coming into the jump or to encourage a green horse. However the whip can also be used to tell the horse off. For example, if the horse stops at the jump and it is not due to rider error.

Gloves

The rider wears gloves to prevent the reins from slipping through their hands whilst jumping the course and to prevent blisters from the reins occurring, especially on a strong horse.

Horse Equipment and the reasons for its use

Flash Bridle

This bridle has a flash strap which is attached to the cavesson noseband and goes around the horse nose, in front of the bit to prevent the horse from opening its mouth and evading the bit of crossing its jaw when being ridden. This enables the rider to have increased control of the hose throughout the course.

Bit

The horse should have a suitable bit in its mouth. In this case the horse has a 3 ring jointed gag, which increases the riders control without placing too much pressure on the poll.

Monoflap Saddle

The saddle has to be suited both to the horse and rider. The saddle is 17.5inch (seat size) and a medium-wide fit. The saddle has to fit the horse appropriately to make sure that it doesn't pinch the horse at all otherwise this will affect the horses jump. The saddle also has to fit the rider to ensure that the rider has a secure seat and lower leg.

Ear Veil

The horse wears and ear veil to prevent it from becoming distracted from any noise as they dull the sound.

Breastplate with a martingale attachment

The horse wears a breastplate to ensure that the saddle doesn't slip backwards when the hose is jumping. A martingale is attached to the breastplate and the reins from the bridle go through the martingale rings. This attachment prevents the horse from putting its head up too high when coming into the jump and ensures more control of the horse for the rider.

Tendon, fetlock and overreach boots or bandages.

The horse wears these boots to prevent injury. The tendon boots go on the front legs and the overreach boots go over the front hoofs, these prevent the horse from pulling of a shoe or cuasing an overreach injury from its hind legs. The fetlock boots go on the hind legs over the fetlock joint and are used to prevent any knock injuries when jumping.

Sheepskin Half Pad with gel eze.

This is a real sheepskin lined half pad with gel insets on the top side. This sits in between the saddle and the saddlecloth. It is used for comfort for the horse and to prevent the saddle from slipping.

Saddlecloth

The horse wears a saddlecloth directly on its back. This is for comfort and to prevent the saddle from slipping and from causing rubs on the horses back when ridden.

Stud girth

This secures the saddle in place and prevents the horse from studding itself and causing and injury to itself when jumping, either with studs or without. It also prevents the horse from becoming discouraged from jumping through any knock that could be caused directly to the skin without a stud girth.

Studs

They are used when jumping on grass to prevent the horse from slipping and to maintain the horse's confidence.

Discussion of safety principles to be applied.

Plastic jump wings and poles

These are used as they prevent the horse from injuring themselves when they knock a pole with their legs and reduces injury to the rider if they fall off a jump

Safety cups(FEI)

These are used so that if the horse lands on a pole eg. Doesn't make the back bar of an oxer and lands on it with its hind legs, then the safety cups will drop and this will reduce the risk of injury to the horse

Riding Hats

Includes a retaining harness secured to the shell at more than two points.

Long Hair

Should be tidy and secured appropriately for safety

Body protectors

Optional

Inflatable air jackets

If worn, must be worn over and in conjunction with a BETA Level 3 approved body protector

Ethics of Show jumping

You have 30 seconds to start the course once the bell has gone. If you start the course before the bell has rung you will be eliminated and if you start after it then you will incure time penalties

Two refusals lead to elimination

One pole=4 faults

Details of preparation, training ad warm up procedures prior to jumping the course

Preparation

Warm up

The warm up before jumping the course should be short and effective. It consists of walking, trotting and cantering on both reins, ensuring that you have a good rhythmic jumping canter. In the warm up transitions should be included to ensure that the horse is listening to you and is concentrated on its job. Then jump a cross pole to start with, then a small upright, increasing the size of the upright until it is the height of the class that you will be jumping. EG. If it is a newcomers, when warming up for the first round you would jump up to about 1.10 in the warm up. Then jump a small oxer increasing the height and width until it is the size of your class. Just before you go into the ring to jump, jump an upright the size of the class to get the horse up infront. When jumping in the warm up, you should jump on both reins as you will be in the class.

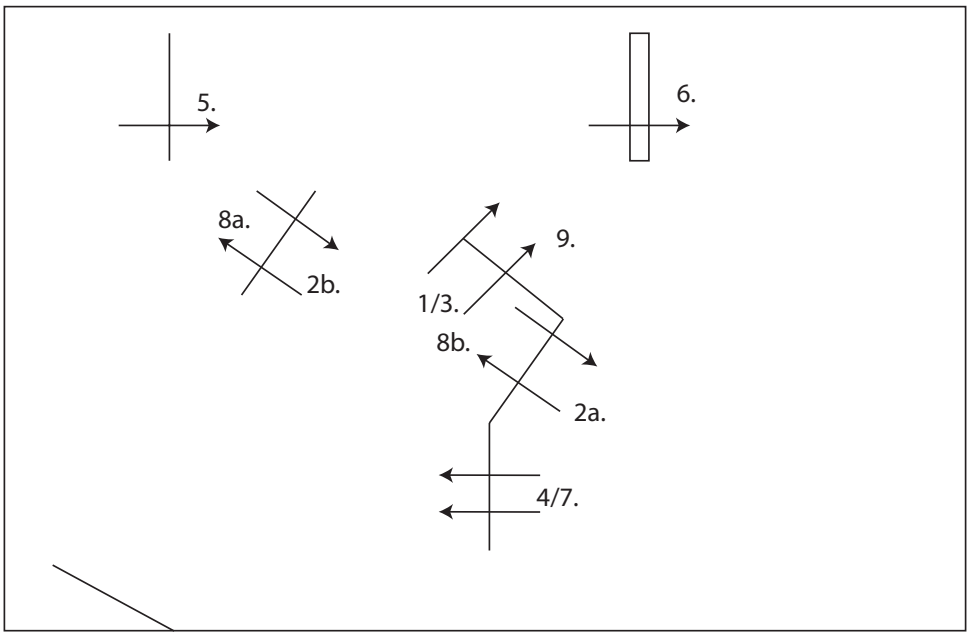
Training

The horse has one day off each week, normally on a Monday following the weekend show/s. Every other day of the week the horse is trained, and her training consists of a mixture of different sessions to work different muscles, always aiming to work the horse through her back and to build up her top line and quarter muscles.

Three days a week she has flatwork sessions which include no jumping and stretch the horse through her muscles and back and they include lateral movements. She has one hack which builds up fitness and adds variety to make sure that the horse does not get bored; it is mainly walking with a bit of a trot incorporated. She has another fitness work session with is either hill work, where the horse has to trot up the hill or a lunge-work session working in the pessoa or with side reins between her legs acting as draw reins. This allows the horse to work without the rider on top. One/two days of the week she has a competition, and if she is not competing then she will have jump training at home working on riding a course, balance and rhythm, jumping off corners, practising jump offs and turns and athletics eg grid work.

Each session lasts from 20mins to 1.5 hours and works on both the horse and the rider.

Training Course at home



The course

1. Purple upright away
2. Double of uprights across diagonal
3. Purple upright away
4. 'Stop' Upright
5. Yellow and red Upright on a related distance to..
6. Oxer
7. 'Stop' Upright
8. Double of uprights across diagonal away
9. Purple upright

Jump Off Course

1. Purple upright away
2. Double of uprights across diagonal
3. Purple upright away
4. 'Stop' Upright
5. Yellow and red Upright on a related distance to…
6. Oxer

Course

The first fence is a straight forward, upright, turning right handed to a one strided double of uprights. Then left handed back to the first fence and turning to the upright on the long side. Then riding around the arena, keeping the canter to a two strided distance of an upright to an oxer, then back to the upright on the long side, before jumping the one strided double in the other direction and back over the purple upright which was also fence 3.

The bit of the course which is likely to be most challenging is two strided related distance. You jump number five shortly after the corner, so therefore you need to keep the impulsion and power of the canter. If you get a deep shot to the fence then you need to push the canter forward, not faster, through the two strides so that the horse can comfortably make the distance and if you get a forward stride to fence 5 then you need to sit on the canter to ensure the horse doesn't bowl on and lose the canter and flatten over the oxer.

The horse that I am riding in the video is very active behind, so in particular in a small arena like this is one (20mx40m) I need to sit on the canter challenging the power into the canter so that the canter stays forward and is not fast. As long as I have this canter then no matter whether I see a long perfect or deep shot to the fence then the horse will always have the ability to jump the fence well.

Jump off Course

Jump fence 1, sharp turn back on yourself to the double, then sharp turn back to purple upright, turn right handed straight away an push on to upright on the longside, then cut the corner but give enough room to get a good forward stride to fence five then two strided double to oxer.

Height of course

The height of the course is 1m10 which is equivalent to the jump off height of discovery. Currently this horse is jumping foxhunters and 120's/125's.

Planning of the course

When planning a course like this at home, it is important to have a jump on each diagonal and down the long side that you can jump in each direction. This is because horses will always go better on one rein than the other so you need to have them jumping off both reins so that you know where more training is needed and where improvements have been made. It is also good to include a double and related distance and practice getting different strides to the fence so that you as a rider can learn how to adjust the canter down the distance, this is important for when you go out competing as some distances may jump longer or shorter than the standard distance and so you need to be able to adjust to the course.

When putting the one strided double in the course I had to walk the distance. One horse stride = 8 human strides. So when I walked two strided double this is equal to 12 human strides.

The equipment used in the course

- The Plastic poles and wings, which can help reduce the chance of injury if the horse happens to hit one
- Safety cups that automatically release are used so that if the horse lands on a pole eg. doesn't make the back bar of an oxer and lands on it with its hind legs, then the safety cups will release and this will reduce the risk of injury to the horse and rider

Horses Safety Equipment

- Correct and properly fitting tack
- Bandages preventing injury, although when training at home back boots may not be used to teach the horse how to use its backend properly.
- The horse should be groomed properly to prevent sores from occurring. In particular girth sores.

Evaluation of course

Overall, the course that I set up was a good course that was able to specifically test the horse and rider over distances. The course rode well and as shown in the video both the rose and rider jumped the course well.

Aims for this year:

Completed

- All Newcomers DC qualified for 2nd rounds
- Qualified Blue Chip Power
- 2 Foxhunter DC's gained, 2 to go to qualify for second rounds

I will then aim to qualify for the amateur championships in the 90cm, 1m, 110 and 115 following gaining all DC's and start jumping and being competitive round 130's

I will be competing at Royal Windsor Horse Show in the foxhunter and the B&C, as well as the Blue chip Championships, Wales and West amateur show, Thame county show, Bucks county show and Scope Festival.

CANDIDATE J

Circuit Training

Physical Education

OCR Advanced GCE Unit G454

Log book cover sheet and authentication statement:

Safe and Effective Exercise Activities - Circuit Training

Centre Number		**Centre Name**	
Candidate Number		**Candidate Name**	

Please indicate below to which Outdoor and Adventurous Activity the log book and authentication statement relates.

Log book element required	**Present? (please tick)**
Time scale	
Goals of exercise programme	
Rationale for the design and implementation of programme	
Identification and detailed description of each exercise in programme	
Detailed description of personal warm up and cool down	
Health and safety implications for programme	
Record of implementation with evaluative comments; detail of progression	
Assessment and evaluation of goals	
Authentication statement from a qualified instructor	
Demonstration of awareness, understanding and application of principles of training in the design and/or implementation of programme with reference to: Specificity, Progression, Overload, Regression, Tedium, Adaptation	

Assessment Band Descriptor which log conforms to

Band 1: A comprehensive, detailed log book which records the candidate's participation in safe and effective exercise activities is in evidence. All the evidence required is present	
Band 2: An extensive, detailed log book which records the candidate's participation in safe and effective exercise activities is in evidence. Most of the evidence required is present	
Band 3: A detailed log book which records the candidate's participation in safe and effective exercise activities is in evidence. Most of the evidence required is present but lacks the necessary detail	
Band 4: A limited log book which records the candidate's participation in safe and effective exercise activities is in evidence. Some of the evidence required is present but lacks the necessary detail	
Band 5: The log book records little or no evidence of the candidate's participation in safe and effective exercise activities	
Mark awarded	Max 40

Authentication statement

I can confirm that this candidate has fully completed the activity as detailed in this log book, meeting all health and safety requirements, and that the material in this log book is the candidates own work.

Name of instructor/teacher responsible	

Signature		Date	

Time Scale

My training programme consists of one circuit, which will last for 6 months (24 weeks); I will do weekly sessions of my circuit. This circuit will incorporate cardiovascular stations, free weight stations and body weight stations, which will help to improve several aspects of my fitness and several aspects of my sport, which is Hockey.

I have chosen cardiovascular stations because I need to be able to last a whole hockey game which means I need good cardiovascular fitness. Having a good cardiovascular fitness means that you will have a larger stroke volume, cardiac outfit, tidal volume and vital capacity; this allows you to maintain your oxygen supply easier helping you keep forming to the best of your ability. I have chosen the weight circuits to improve my muscular strength. This will allow my passes, and shots to become more powerful so that they reach their target faster, meaning there will be less time for interception. The body weight circuits will help to improve my core strength and as well as the cardiovascular stations, will help to delay the OBLA. This would help to delay OBLA, because during aerobic activity lactate levels start to rise and accumulate once the body cannot supply energy quick enough. After this happens the lactic acid system is used to supply energy and lactate levels increase above the speed of its removal, which in turn causes muscle fatigue. However training can delay OBLA because the lactic threshold is increased meaning that I can work at a longer duration before needing to use my lactic acid energy system. My main aim is to improve my overall cardiovascular fitness, muscular endurance, muscular strength and my core strength and flexibility a little bit.

Goals

Short Term Goals:

These goals are what I want to achieve at the end of each of my training sessions:

- I would like to come out of each training session feeling like I have actually pushed myself and have done a good amount of work. I will know if I have pushed myself enough because I will feel tired but not so exhausted that I have no energy left. I will also be breathing heavier to repay my oxygen debt. I will also know if I have worked harder because I will have travelled around the same distance on the machines as I had the week before, or further if I had increased the time I spent on each station.
- I would like to come out also feeling much calmer and not as stressed. I won't be feeling as stressed because during exercise endorphins are produced which makes you feel a lot happier. Low stress levels are also part of a healthy balanced lifestyle, and can reduce the risk of contracting a heart disease because it will lower your blood pressure, putting less strain on your heart.
- Even though I am working hard I would also like to have fun throughout my sessions. To make my session more enjoyable I may listen to music whilst I exercise. This may motivate me more because I will have a beat to work to and keep up with. I may also watch the TV that is incorporated into several of the cardiovascular machines. This may motivate me becaue I will be concentrating on what I am seeing rather than how long I have been on the stations or how long I have left. This should help to eliminate the task of boredom as well.
- I would also like to put in a little goal of trying to reach 2000m in 10 minutes on the rower, during each session; this even outs to 200m per minute. This is just a goal that will help me push myself because I will have an aim before I start that station, which may also give me more motivation for it, as it is also my also station and so I will also be quite tired when I start it.

Long Term Goals:

- I aim to have improved my cardiovascular fitness by the end of this training programme; this will help with my aerobic fitness. Cardiovascular fitness is the ability to exercise the entire body for long periods of time. An improvement in the cardiovascular fitness results in an increase in my tidal volume (the volume of air breathed in or out in a normal breath) and vital capacity (the maximum volume of air that can be inhaled in one breath). These increased factors will allow more oxygen to be taken in and utilised in a shorter amount of time. It will mean I won't have to breath as heavily to sustain the level of oxygen my body demands to carry on exercising. This is good because it means that when I need more oxygen to sustain the activity I can start to breathe deeper and heavier to fulfil this demand.

  It will also improve my stroke volume (the volume of blood pumped from the heart in one beat) and cardiac output (the volume of blood pumped from the heart in one minute). Having a larger stoke volume and cardiac

output will be beneficial because it means that more oxygen will be pumped to my muscles in a shorter amount of time, allowing them to sustain exercise for longer using the aerobic energy system. This will happen because a larger volume of blood is being pumped out of my heart in one beat, also meaning that a larger volume of oxygen is also being pumped out in this one contraction.

This will really help me in hockey because it will help me to play the whole game to the best of my ability; this will allow me to use more energy on powerful fits, passes and short sprints which uses my lactic acid and ATP/PC system. This will help in my defensive (sweeper or central defence) position because it will mean that I will be able to clear the ball away faster and more efficiently; this will hopefully result in less goals being scored by the opposition.

- Another aim is to improve my muscular endurance. Improving my muscular endurance (the ability of a muscle group to sustain repeated contractions) will help because it will mean that I can continue hitting powerful passes and running throughout the entire game. This will allow me to clear hits or passes to outside the D much more efficiently, resulting in stopping a potential goal. I will also be able to pass much more efficiently, which will mean that there will be less chance for an interception to take place due to the faster speed of the ball. My muscular endurance will increase due to the larger amount of oxygen being supplied to my muscles for a longer period of time; this will happen due to a larger stroke volume and tidal volume that have been improved my by cardiovascular fitness. This will be because my aerobic threshold has increased, so I will be able to exercise at a high intensity for longer before having to revert to my lactic acid system which will in turn lead to OBLA and muscle fatigue.
- I also aim to improve my muscular strength (the amount of force a muscle can exert against a resistance). I am not focusing on this aspect as much as the other two components because I think that muscular strength is only used through passing/hitting and not throughout the whole duration of the game like cardiovascular fitness. Having more muscular strength will help me in Hockey because it will allow me to hit more powerful passes. This will mean that they are faster, stronger and will clear out of the defensive area quicker, giving the defence more of a chance to regroup and reorganise, as well as relieving some pressure. My muscular strength will increase due to hypertrophy occurring in my muscles. Muscular strength uses the ATP/PC and lactic acid energy systems (explained later) and so strength training will help to increase these thresholds meaning that I can work within these systems at higher intensity's and for longer durations.

SMARTER goals

I will be using SMARTER goals within my training programme. This is how each target will be included within my training programme:

Specific: I need to make my training programme specific to my own goals within Hockey. I would like to improve how long I can keep up a good pace (Cardiovascular fitness) and still have energy left to sprint and perform powerful passes if need be – this relates to muscular endurance and strength. This means that my circuit is specific to Hockey and myself because they will improve all aspects of my goals.

Measureable: I will be completing both pre and post test results so I can measure if I have improved or not. I will also be recording the distance that I travel on each of my CV machines and how many body weight exercises I do per week. This will help to show me if I have improved as well.

Agreed: I am happy with the circuit that I am doing, what each station involves, how many times I am going to do the circuit and how I will progress it each week. I would change any aspect of the circuit that I didn't like because I have to do the circuit for 6 months, and do not want to suffer drive reduction. If I didn't like an aspect then I may not put 100% effort into it which would mean I wouldn't be trying my hardest or pushing myself enough, so I may not improve as much as I potentially could.

Realistic: I have to make sure that the goals I set myself are realistic and that I can actually achieve them. There is no point in setting myself goals that I won't reach because when I don't reach them it will dishearten me and cause a drop in my motivational levels; this may mean that I won't want to continue with the circuit programme. I have a couple of short term and long term goals that I have set, that I think are achievable. I haven't set a specific amount of how I want to improve because it is hard to tell before I start my circuit how much I may improve by, especially if other aspects become involved e.g. injury, or if for some other reason I am unable to complete my circuit for a week, reversibility may

occur affecting my improvements.

Time frame: The circuit will last for 6 months, with a session each week. I will be doing tests both before and after the circuit so I will have to compensate time for these too. I think that 7 months is a good time frame because it is long enough time period to add progressions within my circuit, and allows me to spend long enough on my circuit to show a reasonable improvement, throughout these progressions.

Enjoyable: I will have to make the circuits enjoyable and varied so that I don't become bored throughout them. My circuit contains 10 different stations, including weights, body weight stations and cardiovascular stations, which means that I am changing activites throughout. This should stop them from becoming too tedious and will stop me from becoming discouraged because I am bored. I may also listen to music, either on a stereo system or on my iPod and also watch the TV's that are built into the CV machines. If I become too bored with my circuit, I may change the order of my stations. This will mean that I am not doing the same exercises in the same order continuously, and so should help to boost my motivational levels.

Recordable: I will be completing both pre and post-tests. Using these test results and my recording of each session, I will be able to record and follow any progress I may make.

Principles of training

When doing my circuit, I will apply the principles of training to help me plan and accomplish my programme

Specificity: This circuit should be specific to me and my sport (Hockey); it is also specific to the aspects that I want to improve on within Hockey. One of my goals is to improve my cardiovascular fitness as this will help me last the whole game of Hockey; therefore my circuits should reflect a cardiovascular aspect. This is reflected in both my type of stations and also within the length of my circuit. The time that I spend on each station will be specific to me and how long I can sustain the exercise; other people may be able to go on for a shorter or longer amount of time compared to me. The progressions within the circuit will also be specific to my own pace, and how my body feels.

Progression: After doing my circuit for a certain amount of time and due to my increasing cardiovascular fitness the time that I am working for may not seem as challenging as they were at first. After this happens I will have to apply progression to my circuit. To do this I will be increasing my time I spend on each station and the weights that I am lifting; this will allow the challenge to be sustained throughout the duration of my circuit. I could do this by increasing the amount of time spent on each station, increasing the weights, increasing the sets/reps I do, or increasing the intensity of the CV machines; all of these progression will also increase the length of my circuit overall. This would help to increase my cardiovascular fitness and muscular endurance because my muscles are working for longer. I could also decrease the rest time between each station and my weight sets; this would be decreasing the amount of time that I have to recover after each station. This will also help to develop my muscular endurance because my muscles will have to work harder due to the decrease of the rest period and the increase in the intensity of the exercise. I will probably progress my body weight stations fortnightly and my CV/weight stations monthly, unless I feel as though I am not ready.

Overload: When I use the principle of overload I will be putting my body under additional stress; this will increase my fitness because my body will have to adapt to meet these new demands; I will need this if I have to sprint during a game after jogging around. I must be careful not to overload my body too much as this could cause me injury and decrease my motivational levels. I can use apply overload through the FITT principle:

Frequency: As I go through my circuit I aim to increase the amount of time I spend at each station, and increasing my weights. This will increase the length of my circuit overall as well. I could also increase how many sessions I do in a week, or the duration of my whole fitness programme as a whole. This will help me to work towards my aims of increased cardiovascular fitness, muscular strength and muscular endurance. This will happen because my body will be working for longer, also allowing hypertrophy to happen to both my muscles and my heart. This means that they wont fatigue as quickly because they will have a larger supply of oxygen and glucose due to my increased tidal volume and muscles stores.

Intensity: Increasing my intensity means that my body will find the demands more challenging, because my body

is expected to work for longer and harder. I can do this by once again increasing the time spent on each station, and increasing my weights.

Time: I can increase the amount of time that I work for. I can increase the amount of time I spend on each station or decrease the amount of time I rest between each station. This will help me towards my goal of increased cardiovascular fitness and muscular endurance.

Type: I could change the type of training that I do. This will be quite hard to do in my cardiovascular stations, but in my body weight circuit I could change my position within some of my stations meaning it is more challenging, making my body work harder. For example in my sit ups I could twist to the side, touching my elbow to my opposite knee.

Reversibility: If I missed a week of training, due to injury or other circumstances then this would result in the principle of reversibility being used; reversibility could also happen if I started to reduce my intensity. I wouldn't lose all the fitness that I gained as it would take longer than just one week for all of it to decrease. For example if I progress my circuit one week and then the next I was off injured, I would lose some fitness (but not all) that I gained due to the progression. I would then need to continue to re-train at a lower intensity to regain the fitness that was lost, before I progress my circuits once more.

Tedium: I have made sure that there is variety within my circuit which should make sure that I do not become bored of it; there are different stations within my circuit including weight and CV stations. If I become bored it may reduce my motivation and my concentration; this may have a negative effect on my mental well-being because I may not reach my goals which could decrease my self-confidence. This boredom may occur when I am quite far through my circuit, so it is important for me to prepare for this. Simple things such as music playing throughout my circuit may prevent this from happening and keep my motivation up. Changing the order of my stations may also increase motivation level because I am varying my stations creating different combinations.

Adaption: Adaption is how the body responds to the demands that training puts onto it and how it adapts to meet these demands. By repeating the stations and the time spent on them, I will allow my body to adapt to the demands, meaning that it will become more used to them. I can then use progression/overload to place new demands onto my body allowing my body to adapt to these; this in turn will make my body become fitter and more able to work for long periods of time. Some of these adaptions include a larger vital capacity, cardiac output, stroke volume, tidal volume and muscular hypertrophy.

Moderation: This is making sure that you do not progress any of your stations too quickly and put too much overload on your body. You don't want to increase it by too much because of an injury risk, but too little and you will get no improvements because there will be very little adaptions. The injuries that occur will most likely be overuse injuries, affecting the joints and the muscular-skeletal tissues, as well as mental and physical fatigue. This would seriously decrease any motivation that I would have to complete the circuit because I would not want to continue to do the programme in fear of hurting myself again, or causing any damage. This may also affect how I lead a BAHL because it may deter me from doing any other physical activity because I will not have the right mind set for it anymore.

Variance: I will need to make sure that I vary my programme to try to eliminate the risk of boredom and motivation loss. If I do the same circuit for 6 months, then it will be very repetitive which means that I may experience a decrease in motivation. This would not be beneficial at all because it may cause me to relax my efforts which will affect any adaptations/improvements that I may have experienced. This is why I have included several different types of stations within my circuit; they are not just all CV or all weight stations. Variety may also help to prevent overuse injuries and repetitive strains such as stress factors and osteoarthritis.

Warm up

"A warm up is a light aerobic exercise that occurs prior to exercise. This usually includes light exercise to increase the heart rate, some stretching exercises for the muscles and some mobilising exercises for the joints."

(OCR PE textbook, Carnell, Ireland, Mackreth, Miller and van Wely)

A warm up is extremely important before exercise as it prepares you both physically and mentally for exercise and helps to prevent the risk of injury; it does this by increasing the temperature within your muscles.

A performers muscles work better when they are warm for several reasons:

Oxygen dissociates from haemoglobin more readily as muscles temperature increases. This means that oxygen is delivered to your muscles faster allowing them to sustain work for longer and improving the speed and force of contractions. This also means that carbon dioxide is removed from muscles faster, which allows a greater concentration of oxygen to be maintained.

The activity of enzymes responsible for cellular respiration increases, which makes energy more readily available within the muscles. This is because as the enzymes gain more heat energy; it transforms into kinetic energy allowing reactions (respiration) to happen faster. This allows the muscles to keep up with the increased demand for energy. These enzymes as well as a faster conduction of nerve impulses improve contraction speed, making your reaction times faster.

Blood vessels within the muscles dilate, further increasing blood flow. This means that more oxygen can be delivered to the muscles, allowing them to maintain exercise for longer; this also removes carbon dioxide from the muscles faster. Vasoconstriction happens in arterioles which decreases the blood flow to certain organs that are needed much throughout exercise e.g. intestines; this allows more blood to be pumped to the working muscles, once again increasing the oxygen supply. Blood viscosity also decrease which improves blood flow to the muscles; this also increases the transportation of oxygen and waste gases. Blood is also re-distributed to the working muscles from organs; this is termed the vascular shunt, and supplies the working muscles with even more oxygen.

An increase in the muscles temperature allows greater stretch within the muscles and connective tissue increasing flexibility. This reduces the risk of injury because your muscles, tendons and ligaments are suppler and so are less likely to tear or become strained because of the greater stretch. More flexibility also increases the strength and speed of contractions.

A warm up also increases your heart rate. This means more blood is getting to the working muscles because stroke volume and cardiac output both increase to keep up with the demands of oxygen and to remove waste products. This also helps to reduce onset of blood lactate accumulation (OBLA). This is where your body produces lactic acid faster than it can remove it. This increase in lactic acid levels causes fatigue to happen faster within the muscles. A warm up decreases the risk of injury, due to the greater stretch within the muscles and the extra synovial fluid being released into the joint structures.

My Personal Warm up

A warm up needs to increase in intensity gradually so that your body becomes used to working at maximum capacity slowly, reducing the risk of injury. My warm up will use gym equipment primarily as it is taking place within a gym. However I may also incorporate activities such as heel flicks, side steps and high knees to create a greater stretch within my knee and ankle joints. I will also do activities such as arm circles to increase my Range of Movement (RoM) at my shoulder joints.

There are 3 stages to a warm up; a continuous submaximal, whole body activity to raise the pulse, and a stretching session including both static stretch and dynamic stretches – both of these stretching sessions will concentrate on the joints and muscles that will be most active. I will spend as long as I feel is needed to on each phase to ensure my body is fully warmed up.

1) I will start on the treadmill:

- 2-3 mins of walking (speed 4.0)
- 2-3 mins of jogging (speed 5.2)
- 203 mins of running (speed 6.0)

2) I will then move onto the cross trainer:

- 1-2 mins at resistance 1
- 1-2 mins at resistance 2

- 1-2 mins at resistance 3

I will use these two pieces of equipment because they both focus on my whole body. This means that all of my body will be warmed up and not just parts of it (such as just my legs or just my arms). These exercises will increase my heart rate and therefore the delivery of oxygen to my muscles. It will also increase my muscles flexibility due to the increase in muscular temperature.

I will then move onto some static stretches. Static stretches help to increase the movement at my joints because it lengthens my muscles, connective tissues and tendons. Static stretching is the safest method of stretching and is the most effective form of stretching to increase the length of the muscles. I will hold the stretch for about 5 seconds, and then will change to the other leg/arm holding the stretch again for about 5 seconds. I shall repeat this alternate stretching about 4 times per leg/arm. I can repeat each stretch if I feel it is necessary. Static stretches may include my Calves, Hamstring, Quadriceps, Bicep and Tricep stretches.

After static stretches I will move onto some dynamic stretching. Static stretching does not prepare the joints for the more powerful RoM that occurs in the actual activity. Dynamic stretching involves more active movement of muscles that bring about a stretch but are not held in an end position; it also helps to increase that I do dynamic stretches last because the muscles will be warmed up, meaning they are more flexible. By incorporating the motion into the stretch there is more chance of an injury occurring within your joints and muscles, which is why you need to stretch and warm up before you this type of stretching. Dynamic stretching should only be performed by people who already have a good range of flexibility in the muscles that are being stretched. You should stretch both your upper and lower body sufficiently. Dynamic stretches may include lunges, squats, hip and shoulder circles, joint rotations and leg swings.

Cool Down

"A cool down is a low intensity aerobic exercise that takes place after physical activity and facilitates the recovery progress."

(OCR PE textbook, Carnell, Ireland, Mackreth, Miller and van Wely)

A cool down is as important as a warm up, if not more. It is important to cool down because your body will return to its pre-exercise state faster if you perform light exercise during your recovery period. It also reduces the risk of injury occurring. A cool down is also a good time to do flexibility exercises because the muscles will be warmed up from training.

It helps to keep the capillaries dilated which supplies the muscles with an oxygen rich blood flow, aiding in the removal of lactic acid and carbon dioxide. This increase in your blood flow flushes out the waste products from your muscles (lactic acid and carbon dioxide). If either of these are left in your muscles for too long, they start to increase the acidity levels of the muscles and can make start to make them ache/hurt.

A cool down prevents blood pooling because your muscle pumps are still active which maintains a high venous return; 85% of your blood volume is distributed to the working muscles throughout exercise. Light exercise ensures that the blood flow back to the heart is maintained and allows the temperature of the muscles to gradually reduce, once again reducing the risk of injury.

It reduces the risk of DOMS (delayed onset muscle soreness). This occurs 24-48 hours after exercise and it is where muscular pain is experienced due to microscopic tears within the muscles fibres. This could lead me to become de-motivated during my circuit because my muscles may feel sore.

A cool down gradually decrease the muscle temperature; if this happened too quickly then the muscles may be more susceptible to tears and strains. Stretching is beneficial because it helps muscles to relax; realigns muscle fibres and returns the muscles to their pre-exercise state, helping to re-establish their normal range of movement.

My Personal Cool Down

After completing my circuit I will do a cool down. The cool down should gradually lower in intensity, allowing the body to recover at a rate that will lower the risk of any injury occurring. Like with my warm up I shall use gym equipment, as well as doing some stretches. I shall do the dynamic stretches first because my muscles will be warmer and more flexible so there will be a less risk of injury occurring.

The same 3 stages apply to the cool down, the sub maximal activity, this time to gradually lower my heart rate and the static and dynamic stretches.

I will stay on the treadmill:

- 2-3 mins of running (speed 8.0)
- 2-3 mins of jogging (speed 7.0)
- 2-3 mins of walking (speed 5.5)

I will use this piece of equipment because it focuses on my whole body. This means that all of my body will be warmed up and not just parts of it (such as just my legs or just my arms). This exercise will gradually decrease my heart rate and allow my body to return to its pre-exercise state.

I will then move onto static and dynamic stretches. This is very important as it can reduce the tension within your muscles and reducing the risk of cramp.

Some stretches that I will do in both my warm up and cool down are below:

Name of static stretch	**Muscles Stretched**	**Description**	**Picture**
Anterior Shoulder Stretch	• Anterior Deltoid • Pectoralis minor	Stand uprights with your back straight, and then clasp your hands behind your back and up towards the ceiling	
Posterior shoulder stretch	• Posterior deltoid • Supraspinatus • Infraspinatus	Stand upright and cross one of your arms across your body. Then pull the elbow of the arm being stretched towards the opposite shoulder. Then repeat this with the other arm.	
Tricep Stretch	• Triceps Brachii	Place your hand on your upper back and aim your elbow towards the ceiling. Pull your elbow towards your head with your other hand.	
Latissimus dorsi stretch	• Latissimus dorsi	Stand upright with your arms above your head, and reach up as high as you possibly can	

Adbominal stretch	• Rectus abdominus	Lie on your stomach, and put your hands at shoulder level. Lift your upper body away from the ground whilst straightening your arms, whilst keeping your hips on the floor.	
Side stretch	• Internal and external obliques	While standing up, reach above the head with one arm. Lean over the opposite side. Repeat with the other side.	
Standing Groin Stretch	• Adductor Magnus • Adductor Longus	Stand with your feet wide apart, and with your knees bent. Bend one knee out to the side and lean to that side. Repeat with the other side.	
Standing Quadriceps Stretch	• Rectus Femoris • Vastus medialis • Vastus lateralis • Vastus intermedius	Stand on one leg, and pull your foot up behind your bottom. Keep your knees together.	
Standing Hamstring Stretch	• Biceps Femoris • Semitendinosus • Semimembranosus	Stand with one leg in front of the other. Bend your back knee, and rest your weight upon it. Tilt your hip forward.	
Gastrocnemius Stretch	• Gastrocnemius	Stand with one leg far in front of the other. Bend the front leg and keep the back leg straight. The back heel should stay flat on the ground. You can use a wall to push against.	

Health and Safety

It is important to consider health and safety when performing my circuit.

When performing my CV stations, I need to make sure that I fully understand how to perform each exercise and how to use the correct techniques on the machines. This is important to avoid injury. To learn how to do these properly I may need a gym induction. Also at each machine there are instructions on how to use them. Before use I will briefly read it so I am sure on how to perform the exercise properly. I was shown how to use the equipment properly and safely by the gym instructor at the Lambourn Leisure Centre.

I should monitor how hard I am pushing myself too, because if push myself too hard then I may start to become less alert making mistakes; this could be dangerous if I am using any machines or equipment, especially weights.

Another aspect I should consider when performing my circuits is the environment that I am in. This is important, as if there is not enough space or if there are any obstacles/hazards, then it could lead to me injuring myself or other people. I will need to make sure that other equipment that I am not using is out of the way and stored away correctly preventing it from becoming a hazard. I should also check that none of the machines are faulty or broken as this could cause harm to me or anybody else that may use them.

I need to make sure that I am in the right attire when I am exercising. This means that I shouldn't be wearing any jewellery and I should have my hair tired up. I should be wearing clothing that is suitable for exercise and clothes that are not too baggy as they could be potential hazards and could potentially get caught up in some of the stations and on the machines. I should make sure that I stay well hydrated throughout my circuits because not drinking enough water could cause my body to become weak and a little bit faint. This could potentially cause injury to me especially if I am using machines as any loss in concentration could cause harm.

I need to be aware when I am using all of the free weights as well. The weights could cause injury if I increase my mass too quickly. I will also need to make sure that I don't drop the weights because this could cause damage to my surroundings or to me, especially if I dropped them on myself.

Muscles Fibres

There are two main types of muscles fibres; slow twitch and fast twitch.

Slow twitch fibres (type 1)

These fibres are suited to aerobic events and use oxygen to generate small amount of force over a long period of time; due to this they are resistant to fatigue. These fibres are suited to endurance events such as a marathon and long distance cycling (Tour De France).

Fast twitch fibres

These fibres are suited to anaerobic events because they generate a large amount of force over a short period of time; they fatigue very easily due to this. These fibres are suited to power/strength activities such as the 110m hurdles.

There are two types of fast twitch fibres:

Fast oxidative glycolytic (type 2a or FOG) – these fibres are more resistant to fatigue than type 2b fibres but do not generate as much force as they do. They are suited to event such as the 800m or 1500m.

Fast glycolytic fibres (type 2b or FG) - these fibres have the greatest anaerobic capacity and can generate the largest force. But due to this they fatigue very easily. These fibres are suited to strength performances such as weightlifting and the 100m sprint.

I will be using slow twitch fibres within my circuit because I will need to endure the length of my circuit. I will also be using them on my CV stations where I will be working for a long period of time. I will be using them more as I introduce progression into my circuit.

I will be using fast twitch fibres mostly in my Body Weight and free weight stations. This is because some of my stations

(e.g. press ups and sit ups) require short bursts of energy and a large amount of force in a small time. This will usually be because I have to support/lift the whole of my body weight quickly and repeatedly.

This table is showing the structural and functional differences of each of the muscles fibres:

Structural Differences			
Characteristics	Slow twitch (Type 1)	Fast Oxidative Glycolytic (Type 2a/FOG)	Fast Glycolytic (Type 2b/FG)
Fibre Size	Small	Large	Large
Number of Mitochondria	Large	Moderate	Small
Number of Capillaries	Large	Moderate	Small
Myoglobin Content	High	Moderate	Low
PC Stores	Low	High	High
Glycogen Stores	Low	High	High
Triglyceride Stores	High	Moderate	Low
Functional Differences			
Speed of Contraction	Slow	Fast	Fastest
Force of Contraction	Low	High	Highest
Resistance to Fatigue	High	Low	Lowest
Aerobic Capacity	High	Low	Lowest
Anaerobic Capacity	Low	High	Highest
Activity Suited			
	Marathon	1500m	110m Hurdler

Muscular Contractions

There are two types of muscular contractions; Isotonic and Isometric.

Isometric: Isometric contractions occur when the muscle is contracting but there is no change in the length of the muscle. This is a static contraction because the joint stays in the same position an example of this is the "plank" exercise.

Isotonic contraction:

There are two types of isotonic contraction:

Concentric: this type of isotonic contraction involves the muscles shortening while producing tension. E.g. during the upwards phase of a bicep curl.

Eccentric: this type of isotonic contraction involves the muscles lengthening while producing tension. E.g. during the downward phase of a bicep curl.

Within my circuit I will be using mainly isotonic contraction. For example I will be using this type of contraction within my press-ups; my Biceps Brachii are contacting concentrically in the downward phase of a press up and will be contracting eccentrically within the upwards phase of the press up. When I am in the starting and finishing position my muscles in my back e.g. Latissimus Dorsi will be contacting isometrically for a short period of time. In my tricep dips my Triceps Brachii will be working concentrically when I am pushing upwards and eccentrically when I am lowering myself downwards.

The table on the next page shows the origin and insertion of the main muscles in the body and the main muscles that I will be using during my circuit. It also shows what movement/action they bring about:

Muscle	Origin	Insertion	Action
Deltoid	Clavicle and Scapula	Humerus	(Anterior) : Flexion, (Middle): Abduction (Posterior) : Extension of shoulder
Triceps Brachii	Scapula and Humerus	Ulna	Extension of elbow joint
Biceps Brachii	Scapula		Flexion of elbow joint
Trapezius	Skull, Cervical and Thoracic Spine	Clavicle and Scapula	Horizontal Extension of shoulder
Pectorallis Major	Clavicle, Sternum and Ribs	Humerus	Horizontal Flexion of shoulder
Latissimus Dorsi	Thoracic and Lumbar Spine, Sacrum and Pelvis	Humerus	Adduction of Shoulder
Internal Obliques	Pelvis	Ribs	Lacteral Flexion and Rotation of spine
External Obliques	Ribs, Vertebrae and Pelvis	Pelvis	Lacteral Flexion and Rotation of spine
Rectus Abdominis	Pelvis	Sternum and Ribs	Rotation of Spine
Erector Spinae group	Ribs, Vertebrae and Pelbis	Femur	Extension of spine
Illiopsoas	Pelvis and Lumbar Vertebrae	Femur	Flexion of hip
Gluteus Maximus	Pelvis, Sarum and Coccyx	Femur	Extension of hip and Lacteral Rotation of hip
Gluteus Medius and Minimus (Hip Abductors)	Pelvis	Femur	Abduction of hip and Medical Rotation of hip
Quadriceps Group	Pelvis and Femur	Tibia	Extension of knee joint
Hip Abbductors: (Rectus Femoris, Vastus Lateralis, Vastus Medialis, Vastus Intermedius)	Pelvis	Femur	Abduction of hip
Hamsteing Group (Biceps Femoris, Semitendinosus, Semimembranosus)	Pevlis and Femur	Tibia and Fibula	Flexion on knee joint
Tibialis Anterior	Tibia	Tarsals and Metatarsals	Dorsiflexion Flexion of ankle joint
Gastrocnemius	Femur	Calcaneus	Plantar Flexion of ankle joint
Soleus	Tibia and Fibula	Calcaneus	Plantar Flexion of ankle joint

Energy systems

During my circuit I shall be using the aerobic energy system pre-dominantly, because I will need to endure the length of my circuit. However I shall also be using the ATP/PC system and the Lactic acid system during my body weight and free weight stations.

ATP/PC system

This energy system provides energy by the breakdown of Phospho-Creatine (PC) and a coupled reaction to re-synthesis ADP+Pi to ATP. The PC bands are broken down by an enzyme called Creatine Kinase; this releases energy. This energy is used to re-synthesis ATP, from ADP+Pi through phosphorylation. This reaction takes place in the sarcoplasm of the muscle cell and is an anaerobic reaction. It produces 1 ATP molecule per 1 PC molecule. This break down is very rapid; however there are limited supplies of PC within the muscles. This means that there is only enough PC to sustain exercise for around 3-10 seconds. There are no by-products produced by this energy system which is a benefit. I would be using this energy system at the very beginning of my free weight and body weight circuits, before moving onto thje Lactic Acid system.

Lactic Acid system

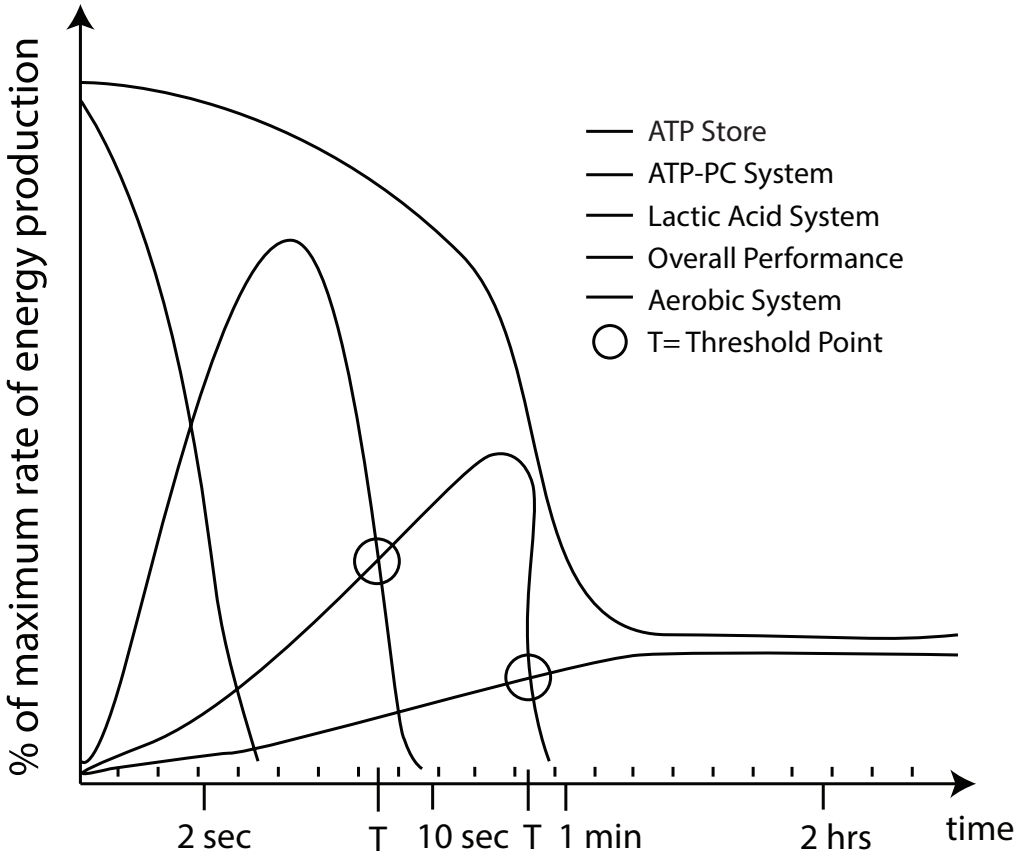
The Lactic Acid system is also an anaerobic energy system and produces 2 molecules of ATP. Energy is released through the breakdown of the glucose into pyruvic acid. Glycogen is broken down into Glucose by Glycogen Phosphorylase (GP), which in turn is broken down into Pyruvic acid by Phosphofructokinase (PFK). This process is known as Anaerobic Glycolysis. Due to the lack of oxygen the Pyruvic acid is converted into Lactic acid by Lactate Dehydrogenase (LDH). This system also takes place within the sarcoplasm of the muscle cells and is still a fast process, although not as rapid as the ATP/PC system. The decrease in PC stores activates the enzymes needed to break down the Glycogen. The Lactic acid system can provide energy for up to 3 minutes of exercise, but peaks at around 1 minute. There is a by-product of Lactic acid which is not very good, because lactic acid causes fatigue within the muscles, and a build up of it can cause OBLA. This is because as lactate levels rise, the PH of the cell decreases which inhibits the enzymes that are involved in glycolysis. This in turn prevents the breakdown of glucose which causes muscles fatigue because no energy is being made. I shall be using this energy system pre-dominantly in my free weight and body weight circuits, because I will be working for around 1-3 minutes, and so will not be crossing over the threshold into the aerobic energy system.

Aerobic system

This is the only aerobic energy system, and requires energy to take place; it produces the most amount of ATP at 38 molecules. There are 3 stafges to this energy system; Aerobic glycolysis, Kreb's cycle and the Electron transport chain (ETC). The aerobic glyucolsis takes places in the sarcoplasm of the muscles cells. Glycogen is broken down into Ghlucose by GP, which is broken down in Pyruvic acid by PFT. The Pyruvic acid then binds with Co-enzyme A to produce Acetyl CoA. The next stage is the Kreb's cycle which takes place in the matrix of the mitochondria. Acetyl CoA binds with oxaloaceltic acid to produce Citric acid, which then enters the Krebs cycle; four events occur. CO2 is produced and removed via the lungs, hydrogen atoms are removed, 2 molecules of ATP are produced and oxaloacetic acid is regenerated. The third and final stage is the ETC, which takes place in the cristae of the mitochondria. Hydrogen atoms combine with the co-enzymes oxidised NAD and FAD to form reduced NADH and FADH; these are then carried down the ETC. The hydrogen's are split into H+ and e-; the e- passes down the ETC which provides energy to produce 34 molecules of ATP, and the H+ ions combine with oxygen to form H20. This energy system is very slow, but can supply a nearly unlimited supply of energy during sub-maximal work. It has by-products of CO2 and water but these are easily removed and have no fatiguing effects. This energy system can use fats as fuel as well; however they require more oxygen to be broken down. You cannot use this system at the start of exercise due to the initial delay of oxygen from the CV system. Once the intensity increases too much for a sufficient amount of O2 to be taken, then you will revert back to the lactic acid system, until the intensity decreases or you can no longer sustain exercise. I shall be using this system pre-dominantly throughout my whole circuit and on my CV stations, because I am working for more than 5 minutes and will be able to supply oxygen to my muscles.

Energy Threshold and Continuum

The energy continuum shows how the energy systems interact to provide energy. They highlight when each system is the pre-dominant system and how they relate to the intensity and the duration of the exercise.



Factors that affect which energy system is being used:

Exercise duration and intensity: when the exercise intensity is anaerobic the then pre-dominant energy systems are the ATP/PC and Lactic acid (LA) systems; when it is aerobic the pre-dominant system is the Aerobic energy system. A point is reached when the aerobic energy system can no longer sustain the demand for energy; at this point you revert back to the LA system. During high intensity exercise lactate accumulates in the muscles, causing it to rise above the "lactate threshold" (4 mmol/L). At this point OBLA will occur which causes muscle fatigue. Through training the lactate threshold can increase, delaying the OBLA, increasing the duration of your LA energy system. So in my more intense weight stations my pre-dominant system will be my lactic acid and ITP/PC system.

Thresholds: The thresholds alter in response to a combination of intensity and duration. Energy systems don't always follow a set route – they can switch between the systems especially if you are playing a team sport such as Hockey. You would need the ATP/PC systems for sprints and the aerobic system for the duration of the game. During the aerobic system the PC is resynthesizes and so when I move onto my weight stations, I will be able to use my ATP/PC system.

02supply/transport: If a sufficient amount of O2 is available then you will use the aerobic system; such as on my CV stations. When the O2 supply falls below the demand then your O2 is reached and the LA system comes back into play; this would happen if my intensity on my stations increased. This would be because I would not be able to take in enough o2 to fulfil my muscles demand for O2. The availability of O2 is dependent on the efficiency of the respiratory and CV systems. This ultimately determines your aerobic threshold. The O2 also effects which food fuel id going to be broken down to resynthesize ATP.

Food/Fuel availability: If the body has sufficient stores of PC then the ATP/PC system will be used. You can re-synthesis

these stores when you are using your aerobic system. Glycogen is the major fuel within the first 2-3 minutes of exercise due to limited O2 supply. Glycogen is readily available and less O2 is needed to break down to break it down than FFA's. 20-45 minutes into the exercise there is a greater breakdown of FFA's alongside glycogen. FFA's produce more energy when broken down, however they require 15% more O2 to break down. The greater the glycogen stores the longer the athlete can work aerobically at a higher intensity. Once the glycogen is fully depleted then your FFA's are needed. However for this to happen the intensity of the exercise will need to decrease of fatigue will suddenly hit; this is called "hitting a wall". When OBLA is reached there is also not enough O2 to breakdown your FFA's. I will be using glycogen as my main fuel in all my stations. I will be using glycogen as my main fuel in my CV stations because my stations only last up to 12 or 14 minutes, and so will not be hitting the 20 minute mark where FFA's have a greater breakdown than glycogen; I will still probably use a little of my FFA's though.

Enzyme activation levels: Enzymes are needed for the breakdown of PC and are also required in glycolysis to resynthesize ATP. Without enzymes there would be no reactions; this means that no energy would be produced. Activating factors for the enzymes are: an increase in ADP and a decrease in ATP, a decrease in PC, an increase in adrenaline and a decrease in insulin. So as I progress through my circuit, my activating enzymes will be continuously changing depending on these factors above.

Fitness level: The more aerobically fit you are the more efficient your respiratory and CD systems are to take in, transport and utilise O2 to resynthesize ATP. Aerobic athletes show that they start to use FFA's earlier during sub-maximal exercise, conserving glycogen. Your aerobic threshold increases as your lactate threshold/OBLA is delayed. Anaerobic athletes will increase ATP/PC, glycogen stroes, anaerobic enzymes and their tolerance to LA. This means an increase in both the ATP/PC and LA thresholds. This should mean that as my circuits progress, and I become aerobically fitter I should find it easier to complete my stations because I will be able to take in and utilise oxygen more efficiently.

Recovery Systems

After exercise you need a recovery stage to allow your body to return to its pre-exercise state. A key part of this process is known as Excess post-exercise oxygen consumption (EPOC); formally known as the oxygen debt. This process explains that the respiratory rate remains elevated after exercise to consume more oxygen to return the body to its pre-exercise state. EPOC has two sages; a rapid recovery stage and a slower recovery stage.

Alactacid debt:

- This is the rapid recovery stage and is also termed the restoration of the phosphogen stores because the elevated respiratory rate helps to resynthesize the muscles stores of ATP and PC.
- It also helps to replenish the muscles stores of myoglobin and haemoglobin.
- This stage requires approximately 3-4 litres of O2 and takes about 3 minutes to fully restore the ATP/PC stores.
- Approximately 50% is restored within 30 seconds and about 75% in 60 seconds.

Lactacid debt:

- This is the slow recovery stage and is responsible for the removal/reconversion of lactic acid.
- This lactic acid is either converted into pyruvic acid to enter the Kreb's cycle or be converted into glycogen, glucose or protein.
- A high percentage of EPOC is also to support metabolic functions that take place after exercise.
- High body temperatures remain for several hours after vigorous exercise, and so this needs to be lowered. Cardiac output helps to reduce temperature by remaining high.
- Hormones, such as adrenaline, also remain in the blood stimulating metabolism, which helps to generate energy, and replace energy stores.
- This stage requires approximately 5-8 litres of O2, and can remove lactic acid from between 1-24 hours after exercise, depending on the intensity and the levels of the lactic acid that need to be removed.

EPOC will always occur during exercise no matter what the intensity; it is the length of the alactacid and lactacid stages that are affected by the intensity. If the activity is more aerobic then not as much oxygen is needed during EPOC because there has been a steady supply during exercise. Also there would have been no high levels of lactic

acid produced and so the lactacid stage would not take that long either. However during anaerobic exercise the oxygen supply is much lower, and so after exercise more oxygen is needed to be taken in to return to pre-exercise levels. There will be high levels of lactic acid and so the removal of this will take longer, meaning the Lactacid stage will be increased. This means that during my circuits my recovery time will vary in accordance to how intense my stations are. It will probably take me longer to recover when I progress my circuit because my body will not be used to the increased intensity. However as my body adapts to these progressions, my recovery time should decrease a bit, because my body shouldn't find the intensity as challenging anymore and so my oxygen deficit or lactic acid levels should not be as high as they were.

During recovery CO_2 also needs to be removed from the body; this is formed as a by-product of respiration. The CO_2s taken to the lungs where it is expired; this is another reason why during EPOC your respiratory and heart rate remains evaluated. During recovery your glycogen stores are replaced; a large percentage of this is replaced within 10-12 hours after exercise; in more prolonged endurance events, such as a marathon, this can take up to two days. The glycogen stores are recovered more quickly if a high carbohydrate diet is consumed. This means that when I get home I may eat a carbohydrates based meal, snack or drink to help with this recovery.

Aerobic Adaptions

During this circuit I shall be using my CV fitness and therefore training my aerobic systems; this will increase its efficiency to take in, transport and utilise oxygen. The table on the next page shows some of the adaptions that will take place during aerobic training. I am hoping that some of these adaptions will take place in me to some extent.

System	Adaption	Effect	Overall effect
Respiratory	• Respiratory muscles become stronger	• Increase in Vital Capacity • Increase in max breathing rate • Increase in respiratory fatigue resistance • Decrease in sub-max breathing rate	• Increased VO_2 max
	• Increase in alveoli surface area	• Increase in external respiration/diffusion • Less O_2 is exhaled and more is used	
Cardiovascular	• Hypertrophy occurs in muscles • Increase in myocardium size, thickness and volume	• Increase in stroke volume • Increase in HR recover after exercise • Increase in ventricular stretch and recoil • Decrease in resting and sub-max HR (below 60bpm=bradycardia)	• Increased blood flow • Increased max cardiac output • Increased O_2 transport
Vascular	• Increased elasticity of arterial walls to vasodilate/constrict	• Increase in vascular shunt efficiency • Increase in blood pressure regulation • Increase in resting diastole/systole	• Increased circulatory efficiency • Improved O_2/CO_2 transport
	• Increased number of RBC/haemoglobin volume and increased plasma volume	• Increase in gaseous exchange/O_2 transport • Increase in venous return • Decrease in viscosity during exercise	
•	• Increased capillarisation (density) of alveoli and Type 1 muscles fibres	• Increase in surface area • Increase in removal of CO_2 and LA during OBLA • Decrease in distance for diffusion	

Muscular	• Increased type 1 and 2a hypertrophy/ efficiency (due to increase in size/ strength)	• Increase in strength and reducing fatigue • Increase in skill efficiency • Decrease in energy costs	• Increased maximal capacity of muscle fibres to generate ATP aerobically
	• Increased muscle capilarisation	• Increase in O_2/CO_2 transport/diffusion during exercise	
	• Increased type 2a fibre ability to work aerobically	• Increase in fibre type % working aerobically • Decrease in OBLA	
	• Increased myoglobin stores	• Increase in O_2 storage and transport to mitochondria	
	• Increased aerobic enzymes	• Improved reliance on metabolism of fat instead of glycogen • Improved aerobic metabolism of glycogen	
	• Increased speed/ability to use fats earlier	• Conserves glycogen stores • Increases amount of ATP from fats	
	• Increased number of mitochondria	• Improved utilisation of O_2/fat for aerobic metabolism	
	• Increased muscle glycogen/fat stores	• Increase in energy fuels to resynthesise ATP	
Connective tissue	• Increased strength of muscles • • •		• Increased strength of musculo-skeletal lever system to endure prolonged activity • Less risk of injury • Reduced rate of ageing
	• Greater thickness/strength of ligaments		
	• Increased thickness/compression of cartilage		
	• Increased calcium content/strength of bones		

	• Reduced body fat composition	• Decrease in dead weight leading to an increase in efficiency (Power to weight ratio)	
Health lifestyle	• Combined effects	• Increase in the lactate threshold • Delay of OBLA	
	• Overall net effect: Increase in VO_2 max	• Increase in the intensity and duration of aerobic performance • Increase in skill/work efficiency	
	• Aerobic metabolism	• Increase in muscles ability to use fuels/O_2 • Increase in the ability of the body to mobilise/supply fuels and O_2 to working muscles • This is dependant upon the individual's fitness to start with but there could be 20-30% improvement within sedentary lifestyles	• Increase in max rate of aerobic work/ endurance • Decrease in lactate production

Types of strength

Maximum strength: Maximum strength is the maximum force that the neuromuscular system can exert in a single voluntary muscle contraction. It represents the maximum weight that an individual can lift just once (1RM). Few sports depend on maximum strength, but I shall be using this in my pre and post-test results to show improvements. This is tested by the leg dynamometer and the grip dynamometer. I shall be using weight machines to measure my max 1RM.

Static strength: Static strength is the force exerted by the neuromuscular system while the muscles length remains constant; this is also known as an isometric contraction (when a force is applied but there is no change in the muscles length). I won't really need to use this type of strength in my circuit, because I have no static exercises such as the "plank". There is no specific test to measure this type of strength.

Explosive/Elastic strength: Explosive/elastic strength is the ability to expand a maximal amount of energy in one or a series of strong, sudden high-intensity movements or apply a successive and equal force rapidly. Elastic strength is like power, but uses the ATP/PC system as its pre-dominant system. This is because it works at a higher intensity and shorter duration than movements that use the LA system as the pre-dominant system. Explosive strength uses the stretch reflex to use the recoil effect, adding force to the concentric muscles contraction. None of my stations will need to use this type of strength that much because they all have a lower intensity, which allows them to use the LA system as they pre-dominant energy system. This is measured mainly by the vertical jump test or the broad jump test.

Dynamic strength: Dynamic strength is the ability to overcome a resistance with a high speed of contraction. It uses the LA test as the pre-dominant energy system.

I shall be using this type of strength mostly in my body weight stations (especially my press ups) and my free weight circuits. To test this type of strength you use the Wingate Cycle test.

Strength Endurance: Strength endurance is the ability of a muscle to sustain or withstand repeated muscle contractions of a single static action. Strength endurance uses oxygen, and therefore uses the aerobic system as the pre-dominate energy system; this is why strength endurance is closely related to aerobic capacity. You can have whole-body endurance and local muscular endurance; local muscular endurance is specific to an area/muscle group, such as in a press up it is your shoulder and arm muscles that are using strength endurance. This is tested most widely by the abdominal sit up test.

My Circuit

I shall be performing one circuit with a variety of stations, ranging from CV stations, to free weights to body weight circuits. I shall be doing a session once a week and I shall progress the time either fortnightly or monthly depending on the station.

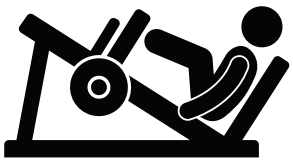
My circuit will include these stations: Leg press, Sit ups, Static bike, Bicep curls, Cross trainer, Tricep extensions, Treadmill, Abdominal crunches and the Rower. They are in this order so that I am working body groups alternately. Working the same body group e.g. upper body consecutively may mean that it cannot work to the best of its ability which will mean that It may even tire faster, meaning I may not be able to work to the standard I know that I can. It will also mean that I will not get an in-balance within my muscle groups as I will be working all my muscle groups evenly. However if I am feeling challenging then I could work the same muscle group consecutively and make it a "super set". This would challenge my muscles, meaning they would have to adapt faster because the intensity is increased.

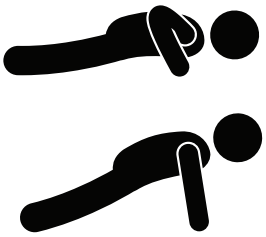
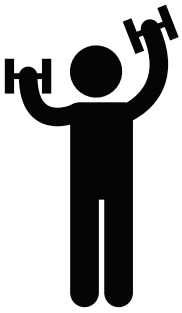
I shall start off with a time of 35 seconds per body weight station, 3 sets of 10 reps on the free weight stations and 7 minutes per CV station, apart from the treadmill which I will start off with 9 minutes. I shall start off with these times as I believe I will be able to sustain this time period, and it also gives plenty of room for progression. I shall rest for 30 seconds between each set on my weight stations and about 1 minute between each station. This will allow me to move onto my next station, wipe down the CV machines and allow myself to have a drink if need be.

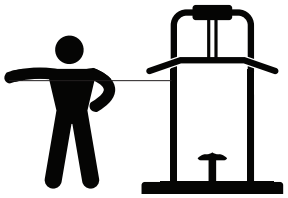
To measure my progress I will be undertaking both pre and post-tests. These results will test my strength in both my upper body and my lower body; it will also test my cardiovascular fitness. Using these results I will be able to see if I have improved; and if so by how much and which results have improved the most. This will also tell me whether I have managed to reach my goals.

In the next lot of pages there are tables describing how to perform the stations properly and which muscles they work. There are also logs of each session, explaining my feeling for each session, as well as how many reps I completed and how long I spent on each station.

My circuit

Exercise	Muscles worked	Instructions	Picture
Leg press	Lower body: Bicep and Tricep Brachii Latissimus Dorsi Teres minor and major Deltoids	Adjust the seat until your knees are at 90' and your feet are shoulder width apart on the board. Sit on the seat and grab the handles with your hands. Straighten your legs until full extension and slowly bend your legs again until back to the start position.	

Exercise	Muscles worked	Instructions	Picture
Sit ups	Rectus Abdominis	Lay on your back with your knees bent, and place your hand by your head. Lift your head, neck and shoulders off the ground, and fold towards your knee. Slowly return to the starting position.	
Press ups	Pectoralis major Triceps Brachii	Firstly, kneel on all fours, before stretching your legs back so your weight is easily distributed. Bend your elbows outward to lower your chest, before pushing back up into the starting position.	
Static bike	Lower Body: Hamstrings Quadriceps Glueteals Gatrocnemius Soleus	Adjust the seat until you are in a comfortable position. Place your feet in the pedal straps, making sure the pedals are on the balls of your feet. Adjust the resistance depending on your exercise programme and start to pedal.	
Bicep Curls	Biceps Brachii	Stand with your feet shoulder width apart, with a weight in each hand and your elbows straight. Bend your allows to lift the weights up to your shoulders. Slowly return to the weights to the starting positon	
Cross trainer	Core: Core muscles Gastrocnemius Soleus Quidricep Hamstrings Glueteals Bicep and Tricep Brachii	Step onto the cross trainer placing your feet in the pedals. Place your hands onto the handles. To move, push forward in the pedals whilst pushing and pulling the handles evenly. Change the resistance according to your exercise programme.	

Exercise	Muscles worked	Instructions	Picture
Tricep extensions	Tricep Brachii	Move the machines clips to the highest settings and attach the d-rings. Hold the d-rings, palms up, by your shoulders and stand a comfortable distance away from the machine. Extend your elbows until the rings are by your thighs. Return slowly to the starting position.	
Treadmill	Lower Body: Core muscles Hamstrings Quadriceps Gluteals Gastrocnemius Soleus	Step onto the sides of the treadmill and attach the safety clip to you. Start the treadmill at a walking pace and step onto the treadmill whilst holding on. When you feel comfortable you can increase the pace and let go of the bar. To stop decrease the pace or press the stop button	
Abdominal crunches	Rectus Abdominis	Lay on your back with your feet off the floor. Lift your head, neck and shoulders off the ground up towards your knees. Return slowly to the start position.	
Rower	Upper Body: Bicep and Tricep Brachii Latissimus Dorsi Teres minor and major Deltoids	Sit on the seat and strap your feet into the food pads and grab the handles. Start with your knees fully bent and your arms extended. Extend your legs and bend your arms at the elbows whilst pulling the handles to your abdomen. Once you are fully extended slowly return to your starting position.	

Circuit	Date: 3rd October	Week: One
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x10 1x10 1x10	70lbs
Sit ups	35 seconds	17
Press ups	35 seconds	14
Exercise bike	7 minutes	1.61km
Bicep curls	1x10 1x10 1x10	4kg
Cross-trainer	7 minutes	1.34km
Tricep extensions	1x10 1x10 1x10	40lbs
Treadmill	9 minutes	0.85km
Abdominal crunches	35 seconds	26
Rower	7 minutes	1429m

Evaluation: This week was my first week of my circuits and so some of it was just getting used to each one of my stations. There was no particular station that I found particularly difficult, and this should not cause any problems throughout the duration of my circuit.

Circuit	Date: 10th October	Week: Two
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x10 1x10 1x10	70lbs
Sit ups	35 seconds	19
Press ups	35 seconds	13
Exercise bike	7 minutes	1.63km
Bicep curls	1x10 1x10 1x10	4kg
Cross-trainer	7 minutes	1.37km
Tricep extensions	1x10 1x10 1x10	40lbs
Treadmill	9 minutes	0.85km
Abdominal crunches	35 seconds	27
Rower	7 minutes	1442m

Evaluation: This week was better than last week because I was much more comfortable with each station. I also found that I seemed to be completing my weight stations easier than I first thought, and so have decided to increase my reps next week. I am also going to increase my body weight circuits by 5 seconds as well.

Circuit	Date: 17th October	Week: Three
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x15 1x13 1x12	70lbs
Sit ups	40 seconds	19
Press ups	40 seconds	15
Exercise bike	7 minutes	1.65km
Bicep curls	1x15 1x13 1x12	4kg
Cross-trainer	7 minutes	1.35km
Tricep extensions	1x15 1x13 1x12	40lbs
Treadmill	9 minutes	0.85km
Abdominal crunches	40 seconds	35
Rower	7 minutes	1436m

Evaluation: I progressed my body weight stations by 5 seconds, and increased my reps on my weight stations – this used the principles of progression and overload as I am putting more demands onto my body. I am also using the principle of adaption because my body will have to adapt to these new demands. I keep each of the CV stations at the same time.

Circuit	Date: 24th October	Week: Four
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x15 1x13 1x12	70lbs
Sit ups	40 seconds	20
Press ups	40 seconds	18
Exercise bike	7 minutes	1.64km
Bicep curls	1x15 1x13 1x12	4kg
Cross-trainer	7 minutes	1.32km
Tricep extensions	1x15 1x13 1x12	40lbs
Treadmill	9 minutes	0.85km
Abdominal crunches	40 seconds	36
Rower	7 minutes	14276m

Evaluation: I am completely comfortable with all these stations now, and so can now focus on my techniques within my stations. I have been doing my circuit for a month now and am feeling comfortable within my exercises. I shall progress each station next week, apart from my weight circuits.

Circuit	Date: 2nd November	Week: Five
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x15 1x13 1x12	70lbs
Sit ups	45 seconds	24
Press ups	45 seconds	21
Exercise bike	8 minutes	1.78km
Bicep curls	1x15 1x13 1x12	4kg
Cross-trainer	8 minutes	1.50km
Tricep extensions	1x15 1x13 1x12	40lbs
Treadmill	10 minutes	0.94km
Abdominal crunches	45 seconds	40
Rower	8 minutes	1654m

Evaluation: I progressed my body weight stations to 45 seconds per station this week and my CV stations by 1 minute each. This is once again using the principles of overload and progression. I am putting more demands on both my strength and CV components of my body, and so found this circuit more difficult than last week.

Circuit	Date: 9th November	Week: Six
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x15 1x13 1x12	70lbs
Sit ups	45 seconds	23
Press ups	45 seconds	20
Exercise bike	8 minutes	1.83km
Bicep curls	1x15 1x13 1x12	4kg
Cross-trainer	8 minutes	1.53km
Tricep extensions	1x15 1x13 1x12	40lbs
Treadmill	10 minutes	0.94km
Abdominal crunches	45 seconds	38
Rower	8 minutes	1663m

Evaluation: I kept all of the stations at the same as last week. I still found this week more challenging than before I progressed my circuit, but I expected this because I was increasing so many components last week. I shall progress my body weight circuits by another 5 seconds next week.

Circuit	Date: 16th November	Week: Seven
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x15 1x13 1x12	70lbs
Sit ups	50 seconds	25
Press ups	50 seconds	22
Exercise bike	8 minutes	1.85km
Bicep curls	1x15 1sx13 1x12	4kg
Cross-trainer	8 minutes	1.55km
Tricep extensions	1x15 1x13 1x12	40lbs
Treadmill	10 minutes	0.94km
Abdominal crunches	50 seconds	39
Rower	8 minutes	1674m

Evaluation: This week I progressed my body weight stations again by 5 seconds. This is not a huge amount of time but it does put just an extra little bit more pressure on my body so that it has to keep on adapting to the demands throughout my circuit. I found this week easier than last week.

Circuit	Date: 23rd November	Week: Eight
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x15 1x13 1x12	70lbs
Sit ups	50 seconds	28
Press ups	50 seconds	25
Exercise bike	8 minutes	1.88km
Bicep curls	1x15 1x13 1x12	4kg
Cross-trainer	8 minutes	1.66km
Tricep extensions	1x15 1x13 1x12	40lbs
Treadmill	10 minutes	0.94km
Abdominal crunches	50 seconds	43
Rower	8 minutes	1724m

Evaluation: I kept all of the timings the same this week. I found that the rower was quite a challenge this week, but I think that was because I pushed myself more on my earlier stations; especially my CV ones. This probably left me feeling quite tired and so I didn't reach the same distance as last week. However I did still managed to stay on target for my 200m in 10 minute target. I shall progress my stations next week because I can push myself, as much as I did today, then I could probably progress further within my exercises.

Circuit	Date: 30th November	Week: Nine
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x10 1x10 1x10	85lbs
Sit ups	55 seconds	37
Press ups	55 seconds	25
Exercise bike	9 minutes	2.04km
Bicep curls	1x10 1x10 1x10	6kg
Cross-trainer	9 minutes	1.89km
Tricep extensions	1x10 1x10 1x10	50lbs
Treadmill	11 minutes	1.04km
Abdominal crunches	55 seconds	43
Rower	9 minutes	1896m

Evaluation: I progressed all of my circuits this week. I felt that I could challenge myself a bit more, especially within the weight stations. I did find this week a harder than last week, but I also came out of it feeling much happier within myself – this was one of my short term goals.

Circuit	Date: 5th December	Week: Ten
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x10 1x10 1x10	85lbs
Sit ups	55 seconds	38
Press ups	55 seconds	29
Exercise bike	9 minutes	2.14km
Bicep curls	1x10 1x10 1x10	64kg
Cross-trainer	9 minutes	1.93km
Tricep extensions	1x10 1x10 1x10	50lbs
Treadmill	11 minutes	1.04km
Abdominal crunches	55 seconds	46
Rower	9 minutes	19206m

Evaluation: I was very pleased with all of my results within this circuit, as they had all increased from last week and noticeably. This may be due to the fact that I felt like I had more energy this week, which may have given me the boost to perform better. I shall progress my body weight circuits next week by 5 seconds again.

Circuit	Date: 12th December	Week: Eleven
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x10 1x10 1x10	85lbs
Sit ups	60 seconds	41
Press ups	60 seconds	30
Exercise bike	9 minutes	2.16km
Bicep curls	1x10 1x10 1x10	6kg
Cross-trainer	9 minutes	1.92km
Tricep extensions	1x10 1x10 1x10	50lbs
Treadmill	11 minutes	1.04km
Abdominal crunches	60 seconds	55
Rower	9 minutes	1912m

Evaluation: I once again progressed some of my stations this week to put more demands onto my body, to make sure that it keeps on adapting. I think because of this progression, I didn't improve dramatically in my stations but I did keep at roughly the same level as last week, which shows that my body is adapting to keep up with the demands being put on it.

Circuit	Date: 19th December	Week: Twelve
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x10 1x10 1x10	85lbs
Sit ups	60 seconds	45
Press ups	60 seconds	25
Exercise bike	9 minutes	2.09lm
Bicep curls	1x10 1x10 1x10	6kg
Cross-trainer	9 minutes	1.88km
Tricep extensions	1x10 1x10 1x10	50lbs
Treadmill	11 minutes	1.04km
Abdominal crunches	60 seconds	48
Rower	9 minutes	1924m

Evaluation: I kept all of my stations the same length again this week, but my results are not as good as last week. I think this is because I was very tired this week, due to not sleeping well the night before. As we know rest is an essential part of BAHL, and so not getting as much sleep did affect my performance. To make sure that this does not happen again I will make sure that I try to get enough sleep to rest my body properly.

Circuit	Date: 28th December	Week: Thirteen
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x15 1x13 1x12	85lbs
Sit ups	65 seconds	53
Press ups	65 seconds	26
Exercise bike	10 minutes	2.29km
Bicep curls	1x15 1x13 1x12	6kg
Cross-trainer	10 minutes	1.93km
Tricep extensions	1x15 1x13 1x12	50lbs
Treadmill	12 minutes	1.13km
Abdominal crunches	65 seconds	50
Rower	10 minutes	2122m

Evaluation: I decided to progress my circuits this week because I felt a lot more energetic than the week before; this also keeps within my progression plan. This week was more challenging than last week, however I did expect that.

Circuit	Date: 4th January	Week: Fourteen
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x15 1x13 1x12	85lbs
Sit ups	65 seconds	53
Press ups	65 seconds	27
Exercise bike	10 minutes	2.19km
Bicep curls	1x15 1x13 1x12	6kg
Cross-trainer	10 minutes	2.01km
Tricep extensions	1x15 1x13 1x12	50lbs
Treadmill	12 minutes	1.13km
Abdominal crunches	65 seconds	50
Rower	10 minutes	2036m

Evaluation: I kept all of my stations the same length as last week. I have also managed to keep on target my goal of 2000m in 10 minutes on the rower, which I am pleased about. I shall progress my body weight circuits once again next week by 5 seconds.

Circuit	Date: 9th January	Week: Fifteen
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x15 1x13 1x12	85lbs
Sit ups	70 seconds	55
Press ups	70 seconds	28
Exercise bike	10 minutes	2.29km
Bicep curls	1x15 1x13 1x12	6kg
Cross-trainer	10 minutes	2.05km
Tricep extensions	1x15 1x13 1x12	50lbs
Treadmill	12 minutes	1.13km
Abdominal crunches	70 seconds	52
Rower	10 minutes	2088m

Evaluation: I once again progressed my body weight stations this week to put more demands onto my body, to make sure that it keeps on adapting. I came out of this feeling quite happy as I am managing well with my adaptions, which I am pleased with.

Circuit	Date:16th January	Week: Sixteen
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x15 1x13 1x12	85lbs
Sit ups	70 seconds	50
Press ups	70 seconds	27
Exercise bike	10 minutes	2.34km
Bicep curls	1x15 1x13 1x12	6kg
Cross-trainer	10 minutes	2.04km
Tricep extensions	1x15 1x13 1x12	50lbs
Treadmill	12 minutes	1.13lm
Abdominal crunches	70 seconds	55
Rower	10 minutes	2081m

Evaluation: I am becoming slightly de-motivated within my circuits, because of the repetitiveness of it. I was afraid that this was going to happen towards the end of my 6 months. Next week I shall change some of my stations around to create a different routine, to try and increase my motivation tonight.

Circuit	Date: 23rd January	Week: Seventeen
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x10 1x10 1x10	100lbs
Sit ups	75 seconds	53
Press ups	75 seconds	30
Tread mill	13 minutes	1.22km
Bicep curls	1x10 1x10 1x10	8kg
Cross-trainer	11 minutes	2.25km
Tricep extensions	1x10 1x10 1x10	60lbs
Exercise Bike	11 minutes	2.52km
Abdominal crunches	75 seconds	59
Rower	11 minutes	2287m

Evaluation: I decided to switch my Treadmill station around with my exercise bike station. This is because this had the least impact on my alternate muscles group workings. I felt more motivated this week because of this change in my normal routine. I also progressed all of my stations because I wanted to stick to my progressive plan.

Circuit	Date: 30th January	Week: Eighteen
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x10 1x10 1x10	100lbs
Sit ups	75 seconds	51
Press ups	75 seconds	35
Treadmill	13 minutes	1.22km
Bicep curls	1x10 1x10 1x10	8kg
Cross-trainer	11 minutes	2.3km
Tricep extensions	1x10 1x10 1x10	60lbbs
Exercise bike	11 minutes	2.46km
Abdominal crunches	75 seconds	53
Rower	11 minutes	2274m

Evaluation: I kept all of my stations the same length again this week, and am finding this change within my stations more motivating. I am still keeping on track with my 200m in 10 minutes on the rower. This ends my circuit on a high because I have achieved one of my short term goals; this also helps to achieve my goal of ending each circuit in a good mood.

Circuit	Date: 7th February	Week: Nineteen
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x10 1x10 1x10	100lbs
Sit ups	80 seconds	66
Press ups	80 seconds	26
Tread mill	13 minutes	1.22km
Bicep curls	1x10 1x10 1x10	8kg
Cross-trainer	11 minutes	2.21km
Tricep extensions	1x10 1x10 1x10	60lbs
Exercise Bike	11 minutes	2.47km
Abdominal crunches	80 seconds	55
Rower	11 minutes	2277m

Evaluation: I was very happy with my results this week because I progressed my body weight circuits and the majority of my results also increased. This is showing me that my body is adapting to the demands that my circuit is putting on it and is continuously adapting to the intensity.

Circuit	Date: 15th February	Week: Twenty
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x10 1x10 1x10	100lbs
Sit ups	80 seconds	53
Press ups	80 seconds	26
Treadmill	13 minutes	1.22km
Bicep curls	1x10 1x10 1x10	8kg
Cross-trainer	11 minutes	2.19km
Tricep extensions	1x10 1x10 1x10	60lbbs
Exercise bike	11 minutes	2.15km
Abdominal crunches	80 seconds	54
Rower	11 minutes	2209m

Evaluation: I think that I am starting to lose motivation again because I found that I was struggling to complete my circuit this week. It wasn't physical tiredness that was affecting me; it was more mental tiredness. Losing motivation is not good because it means that I may want to discontinue with my circuit, and so reversibility would set in and I would end up losing some of my gained fitness. I shall once again chance some more stations around to add more variation to the routine.

Circuit	Date: 22nd February	Week: Twenty-one
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x15 1x13 1x12	100lbs
Sit ups	85 seconds	61
Press ups	85 seconds	33
Treadmill	14 minutes	1.33km
Bicep curls	1x15 1x13 1x12	8kg
Cross-trainer	12 minutes	2.37km
Tricep extensions	1x15 1x13 1x12	60lbs
Rower	12 minutes	2447m
Abdominal crunches	85 seconds	50
Rower	12 minutes	2.54km

Evaluation: I progressed my circuit once again this week, and had a lot more motivation than I did last week. This is shown through all of my results. My abdominal crunches were the only results to go down; however I think this is because I was on the rower before I did this station. The rower exercises your abdominal muscles as well, and because I am not used to doing the stations in this order, it may have affected my results.

Circuit	Date: 28th February	Week: Twenty-two
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x15 1x13 1x12	100lbs
Sit ups	85 seconds	67
Press ups	85 seconds	31
Treadmill	14 minutes	1.33km
Bicep curls	1x15 1x13 1x12	8kg
Cross-trainer	12 minutes	2.34km
Tricep extensions	1x15 1x13 1x12	60lbs
Rower	12 minutes	2467m
Abdominal crunches	85 seconds	57
Rower	12 minutes	2.63km

Evaluation: I didn't progress my circuit this week, as I was still getting used to the different order of my stations. My abdominal crunches went a lot better this week, which shows that my body is adapting to the demands that I am placing upon it. I shall increase my body weight circuits next week by another 5 seconds.

Circuit	Date: 6th March	Week: Twenty-three
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x15 1x13 1x12	100lbs
Sit ups	90 seconds	63
Press ups	90 seconds	34
Treadmill	14 minutes	1.33km
Bicep curls	1x15 1x13 1x12	8kg
Cross-trainer	12 minutes	2.06km
Tricep extensions	1x15 1x13 1x12	60lbs
Rower	12 minutes	2438m
Abdominal crunches	90 seconds	66
Rower	12 minutes	2.23km

Evaluation: I increased some of my stations for the last time this week, and did find this week harder which was good. This challenge is showing that my body is continuing to adapt to the demands because it is still carrying on throughout the stations, even if it is getting tired. This progress is adding to my motivation, and so I am more likely to make sure that I finish my circuit training programme.

Circuit	Date: 12th March	Week: Twenty-four
Station:	**Time/reps:**	**Weight/Distance travelled:**
Leg press	1x15 1x13 1x12	100lbs
Sit ups	90 seconds	64
Press ups	90 seconds	32
Treadmill	14 minutes	1.33km
Bicep curls	1x15 1x13 1x12	8kg
Cross-trainer	12 minutes	2.35km
Tricep extensions	1x15 1x13 1x12	60lbs
Rower	12 minutes	2408m
Abdominal crunches	90 seconds	53
Rower	12 minutes	2.68km

Evaluation: This is the last week of my training programme and I was so happy that I have managed to complete the whole programme without any problems. I didn't get any injuries which shows that I used all of the equipment safely and I performed a proper warm up and cool down, to prevent any aches and strains. I found this week easier than last week, and this was also probably because I knew that this was my last circuit and so my motivation levels were also higher.

Evaluation

I felt that the circuits got easier each week and this is just one indication that I have become fitter throughout my circuits. Another indication is my pre and post test results (see appendix).

Before my 6 month programme my pre-tests showed that my VO2 max was 49.0ml/kg/min. My post tests showed that my VO2 max had stayed the same at 49.0ml/kg/min; there could be many reasons for this. One reason could be that my circuit challenge was not as challenging on my cardiovascular system as I first thought, and so there was not enough adaption to show improvement. Another reason is that there is a limit to how much I can increase my VO2 by; it is about 5-15%, depending on a mixture of factors such as current fitness level and training programme. Because my training programme was not solely a CV training programme and I had a variety of stations, then maybe my CV system was not being worked as much as I first thought. Also if I had good fitness to begin with then my intensity would have had to have been higher for results to show. However I am still pleased with my VO2 because it is still rated "excellent" for my age and weight group. To improve these results next time I could have more CV stations, increase the intensity of the stations or just complete a solely CV circuit.

My strength during my pre-tests measured that my chest press results was 1RM=53.3kg. In my post test results it showed that my chest press results was 1RM=60g; this is an increase of 13%. This shows that my muscular strength (in particular my maximum strength) in my upper body has increased which was one of my long term goals. I am very happy with this result because it has increased by more than I thought it would have; this would be due to hypertrophy occurring within my muscles. My chest press 1RM is rated "superb" for my age and weight group.

My strength measured by the leg press in my pre-tests was 1RM=160kg. In my post test results it showed that my leg press results was 1RM=213.3kg; this is an increase of 33%. I am amazingly pleased with these results because they show that my maximum leg strength has increased by so much. This shows that throughout all of my stations it was probably my legs that were worked the most, and had to adapt most to the demands. This will help me in Hockey a lot because it means that when I am running and sprinting I can push off with my legs with more force; this could help me with my speed. My leg press 1RM is rated "superb" for my age and weight group.

My vertical traction in my pre-test results was 1RM=80kg. My results show that my vertical traction has already fallen to 1RM=65.4kg. This was a bit disappointing because the progress that I had made before the pre-test results had been lost. This may have been because my circuit focused on my upper body and my legs rather than my back, and so my back muscles such as my Latissimus Dorsi would not have had to adapt to any increased demands. However even though I had a decrease in my results, they are still classed as "superb" for my age and weight group. To improve these results next time I could make sure that there are more stations that work my back muscles.

I thought that the circuits went quite well and was very pleased that I did manage to adapt to all of the progressions. I felt a lot better at the end of each circuit and felt like I had actually pushed myself which was one of my short term goals. To improve next time I would take my resting heart rate before the circuit and my heart rate 5 minutes after I had finished my circuit. I would do this to see how long it took my heart rate to recover after I had completed my circuit; the faster it recovered, the fitter I was becoming. Also if my resting heart rate started to decrease again then it would show that I was becoming fitter, because cardiac hypertrophy would have happened meaning my heart didn't need as many beats to supply my body with the oxygen it needed. If my resting heart rate dropped below 60 then bradycardia would have also occurred. I find it easier now to last through a game of hockey now and I also found that I can sprint for longer as well as recovering from them faster; this is helping overall with my game performance. I find that when I am tackling and marking players I can continue to mark them for longer than before. This puts even more added pressure on them, which means that they are more likely to panic and not play their pass very well. I also find that my passes are a lot stronger due to my increased strength, which means that they reach their target quicker and with more force; this means they are less likely to be intercepted or stopped. This means is good in Hockey because it means that the ball can be cleared from the D faster, resulting in my opponent losing their chance to score a goal. Overall I am very pleased with my results, and shall continue to try and keep them up to the level that they increased to.

Reference's used: OCR PE textbook, Carnell, Ireland, Mackreth, Miller and van Wely

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