

Level 4 Strength and Conditioning Learner Timeline to Complete Certification

Week	Task	Corresponding task module	Module video links
1	Task 1A - The athlete profile Task 1B - The sport analysis Task 1C - The athlete assessment	21st century coaching - assessment	Modules
		The needs analysis	
		The coaching relationship - how to get long term results	
2	Task 1D - The GAP analysis Task 2A - The annual plan	Periodisation essentials	Modules
		Designing macro, meso and micro cycles	
		Building the performance programme	
		Designing resistance training programmes	
		Advanced strength and power programs	
3	Task 2B - Microcycles 1-4 Task 2C - Microcycle 1 programs	Speed and agility programming	Modules
		Plyometric training and programming	
		Resistance training progressions	
4	Complete week 1 of program	Advanced programme design	Modules
		Endurance training programme design and energy system training	
5	Complete week 2 of program	Transfer of training	Modules
		Mobility and stability training	
6	Complete week 3 of program	Core training considerations	Modules
		Psychology for sports performance	
		Designing injury reduction programs	
7	Complete week 4 of program Task 2D midway review Task 2E - Microcycle 5-8 Task 2F - Microcycle 5 programs	Nutrition for sport performance	Modules
		Long term athlete development	
8	Complete week 5 of program		Modules
9	Complete week 6 of program		Modules
10	Complete week 7 of program	Recovery and regeneration	Modules
11	Complete week 8 of program Task 2G - The final review Task 3A - Case study review Task 3B - The coach review Task 3C - Vix	brilliant coach, brilliant business	Modules
12	Submit completed learner pack and exam revision	Science of Training	Course recap module

NEEDS ANALYSIS TASK 1-A: CLIENT PROFILE
PLEASE REFER TO PAGE - 4 WITHIN THE CASE STUDY GUIDE
 Case study Profile: (Complete as a consultation)

Name:	
Age:	32
Date of Birth:	22/10/1990
Height:	6ft5
Weight:	80.9
Sport:	Skateboarding
Career Highlight/personal Highlight:	Getting a sponsorship deal
Nationality:	Welsh
County:	Mid Glamorgan
Contact details:	

SPORTING HISTORY
 Injury History: Please highlight any injuries you have sustained in the last 3 years. State the type of injury, area affected, recovery duration. Please give any other detail you feel may be useful:
 Please fillout relevant injury information here:

Rollled right ankle twice, took two weeks to recover from a minor sprain, no treatment, is now fully recovered.

Favourite Sporting Achievement to date:

Be tallied down the hubber at dapham skatepark.

Please describe in detail below a typical week of training that your client is currently performing. E.g. Monday – Court Work, Field work, drills, plyos, track session

Monday:	PM Strength training at the gym (Hypertrophy)
Tuesday:	walk 13100 steps
Wednesday:	Cardio (Lactic interval training), PM Personal training session. (Hypertrophy, strength).
Thursday:	walk 13100 steps
Friday:	PM Speed work
Saturday:	AM Strength training at the gym (Strength endurance). Afternoon Skateboarding 2 to 3 hours.
Sunday:	Skateboarding 2 to 3 hours

Training Component	Athlete Assessment	Rate yourself out of 10 for each component HONESTLY how you feel now. Only a maximum score of 100 can be achieved
Technical Ability	5	
Strength	5	
Strength Endurance	6	
Speed	4	
Speed Endurance	5	
Mental Strength	7	
Commitment to achieving Goals	10	
Ability to avoid injury	7	
Psychological determination to train and compete harder than most	7	
Ability to control lifestyle issues e.g. diet, sleep	5	
Score:	63	

When the form has been completed we will discuss in more detail the training components listed from both an athlete and coach perspective and discuss

Taking into consideration the overall score above and your personal best in your event, how would you rate yourself out of 10 as an athlete at this moment in time?

Score:

Client Preferences Questionnaire

(1) What component of training does your client particularly enjoy and why?

Speed work. Deadlifting strength training, skateboarding ledges. Just because he likes the feeling.

(2) What component of training does your client NOT enjoy and WHY?

Aerobic fitness training, single leg rdl's, balance (manuals) skateboarding. I don't like the way it feels and he's not particularly good at it.

(3) What are your client's motivations for participating in sport? Be specific and write as much as you can.

He wants to be a professional skateboarder.

(4) What are your client's goals for this season/year (give timescales if relevant)?

Landing one trick (rollie front crook) by the end of the third month. Lose body fat percentage by half a percent in the next three months and 5 percent in 20 months.

(5) What are your client's goals and ambitions in sport over the next 3 years (give timescales if relevant)?

Enter 1 competition in spring 2025.

(6) What are your client's goals/ambitions for your sporting career?

Get me down to 22% body fat and through my first skateboarding competition.

Health Questionnaire

For most people, taking part in a programme of physical activity is perfectly safe. However, for a small number, it may be necessary to check with your doctor before embarking on a new fitness regime. For this reason, please fill in the questionnaire below. Please answer each question honestly and speak to me if you are unsure about any of the questions.

Name: Geraint Trigg

Have you ever had any of the following? If yes, please provide full details.

Heart trouble or chest pain? N

Balace Problems? N

High Blood Pressure? N

Hay/fever/sinus problems? N

Asthma? N

Arthritis/Osteoarthritis? N

Sports Injury? N

Muscular aches and pains? N

Back Problems? N

Are you pregnant? N

Do you know of any reason why you should not take part in a physical activity programme? N

Please list any prescribed medication you are currently taking: None

For most people, taking part in a programme of physical activity is perfectly safe. However, for a small number, it may be necessary to check with your doctor before embarking on a new fitness regime. For this reason, please fill in the questionnaire below. Please answer each question honestly and speak to me if you are unsure about any of the questions.

Have you ever had any of the following? Yes or No - If yes, please provide full details.

Heart trouble or chest pain?	No
Balace Problems?	No
High Blood Pressure?	No
Hay/fever/sinus problems?	No
Asthma?	No
Arthritis/Osteoarthritis?	No
Sports Injury?	No
Muscular aches and pains?	No
Back Problems?	No
Are you pregnant?	No
Do you know of any reason why you should not take part in a physical activity programme?	No
Please list any prescribed medication you are currently taking:	No

Signed: Geraint Trigg Date: 29/05/2023

NEEDS ANALYSIS TASK 1-C: THE CLIENT ASSESSMENT				
PLEASE REFER TO PAGE 7-8 WITHIN THE CASE STUDY GUIDE				
Movement Assessments (please see pdf form(s) on step 4 of your dashboard)				
Exercises	Result	Ideal	Notes: (Describe exactly what you observed and avoid copying over previous notes)	
Deep Squat Depth	2	5	Athlete excessively leans forward and knees cave in. Couldn't squat below 90 degrees.	
Deep Squat Shoulders	4	5	Arms fall forward	
Lunge L	3	5	Excessive forward lean, knee lands straight in line with second and third toe, better upright position than the right landing	
Lunge R	3	5	Slight loss of balance when balancing on the left foot.	
Single Leg Squat L	1	5	Knee caves in and back rounds when athlete squats 45 degrees and loss of balance whilst balancing.	
Single Leg Squat R	1	5	Slight knee caving in, not as much as the left side but there is still a lot of rounding of the thoracic spine and shoulders	
Thomas Test 1L (Hip)	5	5	Knee drops down to the bench comfortably with no deviation internally or externally, below 90 in a straight position	
Thomas Test 1R (Hip)	5	5	Knee drops down to the bench comfortably with no deviation internally or externally, below 90 in a straight position	
Thomas Test 2L (Knee)	2	5	Shins are extended, very tight Rectus Femoris (120 degree angle)	
Thomas Test 2R (Knee)	2	5	Shins are extended, very tight Rectus Femoris (120 degree angle)	
Ankle Range L (KTW test)	2	5	0.7 inches	
Ankle Range R (KTW test)	1	5	0.4 inches	
Prone Shoulder Lift Off	4	5	9.5 inches	
Push-Up - 10 reps	5	5	Good alignment, no deviation of the spine or winging.	
Pos Chain L - (Active straight leg raise test)	3	5	18.6 inch raise	
Pos Chain R - (Active straight leg raise test)	3	5	16.6 inch raise	
Standing internal rotation of shoulder (left arm at top)	2	5	7.6 inches	
Standing internal rotation of shoulder (right arm at top)	3	5	8.6 inches	
Name of Test	Result	Ideal	Performance Benchmarks	Rationale
Hexagon agility test	1st clockwise result 36/94 / 1st anti-clockwise result 32/85 / 2nd clockwise result failed attempt as feet landed on the line / 2nd clockwise attempt retook 30/53 / 2nd anti-clockwise attempt 40/50 / Result: Clockwise average 33s Anticlockwise average 32s / 2nd result: Clockwise - Poor Anticlockwise - Poor	Good (between 13s.4 and 15s.5)	To test my client's ability to move quickly in multiple directions whilst still maintaining good balance. As suggested in the level 4 manual page 24, it's important to check my athlete's ability in certain areas to improve his ability to jump better. " Can the athlete perform the movements well? (squatting, jumping & landing) Are they strong enough to absorb/ reduce the impact forces (stiffness)? • Do they possess symmetry? Left vs. Right? • Are they reactive? (Efficiency of SSC) "The hexagon agility test will help me identify any asymmetry when my athlete jumps both clockwise and anti-clockwise and my athlete's reactive strength index will also be tested. "The hexagon agility test shows excellent reliability for measuring agility, which supports its use as a tool to assess athletic performance and lower-extremity agility. Evidence of reliability, in addition to its ease of administration, makes the hexagon test a practical and effective method to measure agility." 1	1- 2nd easiest reliability and minimal discomfort change of the hexagon agility test - Published (url:pubs) (11th line of abstract)
Vertical jump test	1st attempt 10.3 inches / 2nd attempt 11.3 inches / 3rd attempt 10.5 inches Best of three result - Poor	Good (between 16 and 20 inches)	The vertical jump test is to test my athlete's leg power and ability to land whilst absorbing force. Although when performing a jump on a board from 45.7 cm height, which is roughly the height from where my athlete will be jumping from when practicing his new trick. "These propulsive peak values are similar in magnitude to those observed in runners who raise the center of mass to a much lesser extent in each step (Frederick & Hagg, 1985) "2 Also, "jumping, cutting and pivoting activities occur in almost all sports and each has plyometric demands, thus the concept of power development is the key for many activities of daily living, work related activities, recreational, and competitive sports." 3	2- PDF: Biomechanics of Skateboarding: Kinetics of the Take-Off (url:pubs) 3- Accuracy of CONCEPTS DE DYNAMIQUE SPORTIVE - PNEU (url:pubs) Examples of plyometrics in athletics". The Vertical Jump Norms (topendsports.com)
T-Test	1st attempt fail as athlete finished on the wrong side of the cone / 2nd attempt 14/66 / 3rd attempt 12/44 / 4th attempt fail, wrong hand used to touch the cone / 5th re-try failed, hit the cone at finish. / Best of two completed attempts result - Poor	Good (between 9s.0 and 10s.5)	Testing my athlete's agility and ability to accelerate and decelerate rapidly whilst moving in a sagittal and in a frontal plane which is very useful to have because of the lateral movement that the sport requires during a jump, also known as an "ollie". At the same time the skater jumps up and usually forward while using the lateral forefoot of the leading foot to control and direct the trajectory and spatial orientation of the board" 4 Also, based on my strength and conditioning studies, because my athlete's goal is to try and achieve one trick and the performance will only require 0s to 15s of Anaerobic / Alactic training, the T- test will also be an adequate testing method of 0 to 10 seconds effort as this would place my athlete in the maximal intensity range and able me to re-test my athlete's progress in the ATP-PC energy system.	4- Biomechanics of skateboarding: Kinetics of the Take-Off (url:pubs) Paragraph three of page 34, middle of the 6th line 1- Test of Agility (topendsports.com)
Skin-fold measurement	Measurement were taken in lower shorts. Weight was: 80.9kg Subscapular: 36 Suprailiac: 34 Triceps: 10 Skins: 5. Total: 85 Result: 27.21 body fat % / 21.84kg body fat / Lean muscle tissue 59.06kg	very poor	Testing my athlete's body fat percentage will be important, as one of my athlete's goals is to be in between 10% and 22% body fat percentage (a healthy range of body fat % for his age and gender). I chose to measure my athlete's progress using the skin fold method "The results of this study indicated that relative agreement in the measurement of subcutaneous body fat between skinfold and computed tomography measurements was superior to that exhibited between ultrasound and computed tomography measurements. This finding enhances the potential use of skinfold calipers in the clinical setting, particularly in view of the fact that measurement of subcutaneous body fat at different body sites is becoming increasingly important for the characterization of risk of certain disease states." 5	5- Accuracy of subcutaneous fat measurements: comparison of Multiple calipers, ultrasound and computed tomography - PubMed (url:pubs) The "Applications/Conclusions" section pubs10_tables4_4-4-5_updated.pdf (scisearch)

PERFORMANCE PROGRAMMING AND PLANNING TASK 2-B: MICROCYCLES 1-4

PLEASE REFER TO PAGE 14 WITHIN THE CASE STUDY GUIDE

Week 1	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
AM:	Aerobic fitness	Corrective exercise	Lactic System Cardiovascular training	Full Rest	Speed endurance work	SMR and Static stretching	Skateboarding
Session aims:	7k run	Improve ankle mobility	Improve ability to sustain 30s of high intensity and recover for 1 minute. x12		15s maximal effort and 3 minutes active recovery. x5	Active recovery	Maintain repertoire of Tricks
PM:	Mobility / flexibility / Strength / Basic strength / Plyometrics / Technique work	Evening Walk	Mobility / flexibility / Strength / Basic strength / Plyometrics / Technique work	Full Rest	Corrective exercise	Skateboarding	Full Rest
Session aims:	Improve mobility / Strength / Vertical jumps technique	Active recovery	Improve mobility / Strength / Vertical jumps technique		Improve ankle mobility	Learn the nollie crook	

Client also decided to skate

Client hurt knee

Client went for a walk instead of skateboarding due to knee injury

Week 2	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
AM:	Aerobic fitness	Corrective exercise	Lactic System Cardiovascular training	Full Rest	Speed endurance work	SMR and Static stretching	Skateboarding
Session aims:	7k run	Improve ankle mobility	Improve ability to sustain 30s of high intensity and recover for 1 minute. x12		15s maximal effort and 3 minutes active recovery. x5	Active recovery	Maintain repertoire of Tricks
PM:	Mobility / flexibility / Strength / Basic strength / Plyometrics / Technique work	Evening Walk	Mobility / flexibility / Strength / Basic strength / Plyometrics / Technique work	Full Rest	Corrective exercise	Skateboarding	Full Rest
Session aims:	Improve mobility / Strength / Vertical jumps technique	Active recovery	Improve mobility / Strength / Vertical jumps technique		Improve ankle mobility	Learn the nollie crook	

Week 3	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
AM:	Aerobic fitness	Corrective exercise	Lactic System Cardiovascular training	Full Rest	Speed endurance work	SMR and Static stretching	Skateboarding
Session aims:	7k run	Improve ankle mobility	Improve ability to sustain 30s of high intensity and		15s maximal effort and 3 minutes active recovery. x5	Active recovery	Maintain repertoire of Tricks
PM:	Mobility / flexibility / Strength / Basic strength / Plyometrics / Technique work	Evening Walk	Mobility / flexibility / Strength / Basic strength / Plyometrics / Technique work	Full Rest	Corrective exercise	Skateboarding	Full Rest
Session aims:	Improve mobility / Strength / Vertical jumps technique	Active recovery	Improve mobility / Strength / Vertical jumps technique		Improve ankle mobility	Learn the nollie crook	

Week 4	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
AM:	Aerobic fitness	Corrective exercise	Lactic System Cardiovascular training	Full Rest	Speed endurance work	SMR and Static stretching	Skateboarding
Session aims:	3.5k run	Improve ankle mobility	Improve ability to sustain 30s of high intensity and recover for 1 minute. x 6		15s maximal effort and 3 minutes active recovery. x 2	Active recovery	Active rest
PM:	Postural assessment	Evening Walk	Vertical Jump / T-Test / Hexigon Agility Test	Full Rest	Corrective exercise	Skateboarding	Full Rest
Session aims:	Re-assess movement improvements made	Active recovery	Re-assess performance improvements made		Improve ankle mobility	Active rest	

PERFORMANCE PROGRAMMING AND PLANNING TASK 2.0 - THE MIDWAY EVENT				
PLEASE REFER TO PAGE 16 WITHIN THE CASE STUDY GUIDE				
Movement Assessment (Please use a pdf template on step 4 of your dashboard)				
Exercise	Result	Goal	Notes (Describe exactly what you observed and avoid copying over previous notes)	
Deep Squat Depth	2	5	My athlete wasn't able to pass 90 degrees, there was knee valgus, a forward lean, toes that came up and ankle dorsiflexion was poor.	
Deep Squat Shoulders	4	5	Good shoulder mobility but arms were behind the head and not in line with his ears. He managed to keep his arms up whereas last month they fell forward.	
Lunge L	3	5	A forward lean, little dorsiflexion on the front ankle and leg extended, no change since last month apart from client not bending their back (right) knee as much which could be due to their knee injury.	
Lunge R	2	5	Foot turns out and slight knee valgus A forward lean and unstable ankle. Client had a slight bruise on the right knee from a fall he had skateboarding. There is still some instability in the right ankle like last month.	
Single Leg Squat L	1	5	At 45 degrees - knee valgus, spine neutral but forward leaning, big toe comes up, slight instability. (client was lacking dorsiflexion on the ankle to bend lower than 45 degrees). Back is no longer rounding like last month when client squats to a 45 degree bend and athlete managed to keep balance.	
Single Leg Squat R	1	5	At a 45 degree bend there was some knee valgus, slight rounding of lower back, slightly more unstable than left side (client was lacking dorsiflexion on the ankle to go lower than 45 degrees). The right side seemed to be worse than the left side this month but his lower back rounding this last month.	
Thomas Test 11 (Hip)	4	5	Knee drops down laterally showing signs of a shortened tensor fasciae latae / iliotibial band. Slightly tighter hip than last month.	
Thomas Test 18 (Hip)	5	5	Knee drops down to the bench comfortably with no deviation internally or externally, and below the table surface. There is no change since last month.	
Thomas Test 21 (Knee)	1	5	Shins extend at a 170 degree angle, much tighter rectus femoris when compared to last month.	
Thomas Test 28 (Knee)	1	5	Shins extend at a 170 degree angle, much tighter rectus femoris when compared to last month.	
Ankle Range L (RTW test)	2	5	1 inch. Athlete shows signs of range improvements by 3 inches when compared to last month.	
Ankle Range R (RTW test)	1	5	0.6 inches. Athlete shows improvements by 0.2 inches when compared to last month.	
Prone Shoulder Lift Off	5	5	13 inches. Athlete has improved their shoulder mobility by 3.4 inches when compared to last month.	
Push-Up - 10 reps	5	5	Strong abt engagement, spine neutral, shoulders depressed.	
Push-Up - Active straight leg raise test	4	5	21.4 inches. Athlete improved their range by 2.8 inches when compared to last month.	
Pos Chain R - Active straight leg raise test	3	5	14.4 inches. Athlete has decreased their range by 2.2 inches when compared to last month. Client has an injury on their right knee. Slight bruising from a fall he had while he was skateboarding.	
Standing internal rotation of shoulder (left arm at top)	4	5	10 inches. Athlete has improved their range by 2.4 inches, making their right shoulder's internal rotation more dominant.	
Standing internal rotation of shoulder (right arm at top)	2	5	8 inches. Athlete has decreased in range by 0.6 inches.	
Performance Benchmarks				
Name of Test	Result	Goal	Subnote	
Hexagon agility test (Athlete felt very stressed and only managed to do one attempt at the anticlockwise at 31:55)		Good (between 13.4 and 15L5)	<p>This week my client failed the first three tests. When my athlete was asked the reason as to why this could be and identifying some of the reasons, discussing the reason. We finally came up with the conclusion that my client had a bit on their mind and was finding it difficult to concentrate. After doing some meditation, we managed to get the last bit of the test as a complete attempt but clockwise result fell due to landing on the line / 1st anti-clockwise result fell due to landing on the line/ 2nd clockwise result failed due to my athlete's feet landing on the line / 2nd anti-clockwise attempt 31:55 / Result : inconclusive due to Athlete finding it hard to concentrate on the test. This also gives me a better understanding of my athlete and how to prepare for such days, whereby my athlete feels stressed from work. It might be better to implement some breathing exercises and meditation work prior to starting the first test month to take extra precaution so to get a better result.</p> <p>To test my client's ability to move quickly in multiple directions whilst still maintaining good balance. As suggested in the level 4 manual page 54, "it's important to check my athlete's ability in certain areas to improve his ability to jump better." Can the athlete perform the movements well? (agility, jumping & landing) Are they strong enough to absorb / reduce the impact forces (internal)? Do they possess symmetry? Left vs. Right? Are they reactive? (Efficiency of SSC's). The hexagon agility test will help me identify any asymmetry when my athlete jumps both clockwise and anti-clockwise and my athlete's reactive strength index will also be tested. The hexagon agility test shows excellent reliability for measuring agility, which supports its use as a tool to assess athletic performance and lower extremity agility. Evidence of reliability, in addition to its ease of administration, makes the hexagon test a practical and effective method to measure agility."¹</p>	
Vertical jump test	1st attempt 9.8 inches / 2nd attempt failed due to tape lifting off his finger / 3rd attempt 9.6 inches 4th attempt 11 inches. Best of four results : Poor. My athlete has not improved his vertical jump since last month, as his result is still "poor". Although my athlete has recently recovered from a knee bruise, having fallen off his skateboard.	Good (between 16 and 20 inches)	<p>The vertical jump test is to test my athlete's leg power and ability to land whilst absorbing force. Although when performing a jump on a board from 45.7 cm height, which is roughly the height from where my athlete will be jumping from when practicing his new trick. "These propulsive peak values are similar in magnitude to those observed in runners who raise the center of mass to a much lesser extent in each step (Frederick & Hage, 1982)² Also "jumping, cutting and pivoting activities occur in almost all sports and each has plyometric demands, thus the concept of power development is the key for many activities of daily living, work related activities, recreational and competitive sports."³</p>	
T-test	1st attempt this month : 13.3, last month was a fail as my athlete finished on the wrong side of the cone / 2nd attempt this month was 12.18 and last month was 14.05 / 3rd attempt this month was 11.05 and last month was 12.84 / 4th attempt this month was 11.09 and last month was a fail, because my athlete used the wrong hand to touch the cone / 5th attempt this month was a fail because he didn't touch one of the cones and last month it was also a failed attempt because he hit the finishing cone whilst running. Although my client's best time is still "poor", he managed to beat his own best score by 0.37 and also only failed one of the attempts this month as opposed to three times last month.	Good (between 10.0 and 10.5)	<p>Testing my athlete's agility and ability to accelerate and decelerate rapidly whilst moving in a sagittal and in a frontal plane. Which is very useful to have because of the lateral movement that the sport requires during a jump, also known as an "take". At the same time the skater jumps up and usually forward while using the lateral foot/foot of the leading foot to control and direct the trajectory and spatial orientation of the board.⁴ Also, Based on my strength and conditioning studies, because my athlete's goal is to try and achieve one trick and the performance will only require 0s to 15s of Anaerobic / Alactic training, the T-test will also be an adequate testing method of 0 to 20 seconds effort on this would place my athlete in the maximal intensity range and able to re-test my athlete's progress in the ATP-PC energy system.</p>	
Skin-fold measurement	Measurement was taken in lower shorts. Weight : before 80.9kg / after 82.9kg Subscapular before 36 / after 32 Suprailiac before 34 / after 38 Tricip before 10 / after 17 Recap before 5 / after 5. Total : 85 Result : before 27.3 / after 26.44 body fat % / before 21.84kg / after 23.34kg body fat / Lean muscle tissue before 50.08kg / after 58.78kg. My client gained 1.5kg in body fat. My client believes that he has not been keeping a close eye on his nutrition and has not been completing his steps every day and that this is something he will do this month. He also believes he is drinking too many coffees with too many sugars a day, which he is going to cut down to having one, rather than three cups a day.	Good (between 12% and 22% body fat)	<p>Testing my athlete's body fat percentage will be important, as one of my athlete's goals is to be in between 10% and 22% body fat percentage (a healthy range of body fat % for his age and gender). I chose to measure my athlete's progress using the skin fold method "The results of this study indicated that relative agreement in the measurement of subcutaneous body fat between skinfold and computed tomography measurements was superior to that exhibited between ultrasound and computed tomography measurements. This finding enhances the potential use of skinfold calipers in the clinical setting, particularly in view of the fact that measurement of subcutaneous body fat at different body sites is becoming increasingly important for the characterization of risk of certain disease states."⁵</p>	

1- Test retest reliability and internal consistency of the hexagon test
<https://doi.org/10.1080/10913671.2016.1191151>
 2- Examples of plyometrics in athletics. The fourth line of the third paragraph.
<https://www.researchgate.net/publication/311111111>
 3- CURSIVE
<https://www.researchgate.net/publication/311111111>
 4- Biomechanics of skateboarding. Examples of the take. Paragraph three of page 34 middle of the sixth line.
<https://www.researchgate.net/publication/311111111>
 5- Accuracy of subcutaneous fat measurement: comparison of skinfold calipers, ultrasound and computed tomography. The Applications/Clinical Use section.
<https://doi.org/10.1002/ajim.21111>

PERFORMANCE PROGRAMMING AND PLANNING TASK 2-E : MICROCYCLES 5 - 8

PLEASE REFER TO PAGE 17 WITHIN THE CASE STUDY GUIDE

Week 1	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
AM:	Speed endurance work	Full Rest	Lactic System Cardiovascular training	Full Rest	Aerobic fitness	SMR and Static stretching	Skateboarding
Session aims:	15s maximal effort and 3 minutes active recovery. x5		Improve ability to sustain 30s of high intensity and recover for 1 minute. x5		7k run	Active recovery	Maintain repertoire of Tricks
PM:	Mobility / flexibility /Maximal strength, Power, speed work.	Corrective exercise	Mobility / flexibility /Maximal strength, Power, speed work.	Full Rest	Corrective exercise	Skateboarding	Skateboarding
Session aims:	Improve mobility / Power and speed whilst maintaining strength	Improve ankle mobility	Improve mobility / Power and speed whilst maintaining strength		Improve ankle mobility	Learn the nollie crook	Maintain repertoire of Tricks
Week 2	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 1	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
AM:	Speed endurance work	Full Rest	Lactic System Cardiovascular training	Full Rest	Aerobic fitness	SMR and Static stretching	Skateboarding
Session aims:	15s maximal effort and 3 minutes active recovery. x5		Improve ability to sustain 30s of high intensity and		7k run	Active recovery	Maintain repertoire of Tricks
PM:	Mobility / flexibility /Maximal strength, Power, speed work.	Corrective exercise	Mobility / flexibility /Maximal strength, Power, speed work.	Full Rest	Corrective exercise	Skateboarding	Skateboarding
Session aims:	Improve mobility / Power and speed whilst maintaining strength	Improve ankle mobility	Improve mobility / Power and speed whilst maintaining		Improve ankle mobility	Learn the nollie crook	Maintain repertoire of Tricks
Week 3	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 1	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
AM:	Speed endurance work	Full Rest	Lactic System Cardiovascular training	Full Rest	Aerobic fitness	T-Test	Corrective exercise
Session aims:	15s maximal effort and 3 minutes active recovery. x5		Improve ability to sustain 30s of high intensity and		7k run	Test Athlete's improvement made	Improve ankle mobility
PM:	Vertical Jump test and Hexigon Agility Test	Corrective exercise	Corrective exercise	Full Rest	Corrective exercise	Skateboarding	Skateboarding
Session aims:	Test Athlete's improvement made	Improve ankle mobility	Improve ankle mobility		Improve ankle mobility	Maintain repertoire of Tricks	Maintain repertoire of Tricks
Week 4	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 1	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
AM:	Aerobic fitness	Corrective exercise	Lactic System Cardiovascular training	Full Rest	Speed endurance work	SMR and Static stretching	Skateboarding
Session aims:	3.5k run	Improve ankle mobility	Improve ability to sustain 30s of high intensity and		15s maximal effort and 3 minutes active recovery. x 2	Active recovery	Active rest
PM:	Postural assessment and body fat check	Evening Walk	Mobility / flexibility /Maximal strength, Power, speed work. (Split 1)	Full Rest	Corrective exercise	Skateboarding	Full Rest
Session aims:	Re-assess movement improvements made and body fat percentage lost.	Active recovery	De-load session (Half intensity and Half Volume)		Improve ankle mobility		Active rest

PERFORMANCE PROGRAM REVIEW TASK 3-A : CASE STUDY CONCLUSIONS

PLEASE REFER TO PAGE 20 WITHIN THE CASE STUDY GUIDE

Performance Program Review

Athlete Recap: (Summarise their initial aspirations)

Did the athlete improve upon their movement assessments and performance benchmark scores?:

My athlete's strength, speed, change of direction and ability to stay focused during a task that is set has improved. My athlete has shown significant improvements in his performance when he was re-evaluated at performing the T-test, hexigon agility test and vertical jump test. My athlete's flexibility and weight management seems to be more of a challenge due to a past right ankle injury, the sedentary nature of his job, his sugar intake and inconsistency in tracking his steps and poor lifestyle nutritional habits, which we have set targets to improve in.

How did the athlete manage with the SMART goals set? (these goals may be different to the performance markers)

Because of my client's training age, it was very difficult for him to understand what would be a realistic goal for him to set. It was also really difficult for my client to admit that he wants to be a professional skateboarder because he was scared of being judged for it. After a long conversation and talking about where he wanted to be by next year, we back tracked and found some goals that he would have to attain to reach his outcome goal.

What were the athletes Strengths and areas for improvement?

My athlete sometimes finds it hard to concentrate on the task given. However he also is very dedicated on becoming strong and will take the direction I give him and always push himself as hard as I want him to. He has definitely gotten a lot stronger and faster since the start of his training sessions. My athlete's strengths were him being 100 percent dedicated to his performance and the task at hand during his sessions. I think if he could aim to put the same dedication outside of his sessions to his nutrition and step count goal he would improve even further in his weight loss journey.

PERFORMANCE PROGRAM REVIEW TASK 3-B : THE COACH REVIEW

PLEASE REFER TO PAGE 21 WITHIN THE CASE STUDY GUIDE

Coach Review

What do you feel you learnt throughout the learning experience and process?:

research I did and the help I got from Ste from the mentorship program really taught me a lot about the necessities of strength training for skateboarders specifically which also really helped me to, at times, educate my clients as to why we were doing certain exercises and the benefits it will bring to their skateboarding practice. I also was recommended some amazing books to read by Ste, so the learning will never stop.

Identify what you feel are your strengths as a coach, giving explanations behind these conclusions:

I'm really good at getting information out of my athletes to understand if the session needs a slight re-shaping. My athlete got a bruise on his knee half way through this case study which kept me on my toes and meant that I had to sometimes shape the warm ups and stretches a little differently to make it more comfortable for my client to perform them in our sessions. He felt as though he was regressing, but by giving him things he can do, whilst also educating him in the residual effects of strength training, knowing that if he needed to skip a day of training to recover, he wouldn't be regressing as quickly as he thought he would be. In my client's words ' You were really good at keeping me motivated and giving me knowledge when I needed it'.

Identify what you feel are the areas in which you feel you could improve upon as a coach, give details on what draws you to these conclusions:

After I completed my case study I felt like I was still using way too many exercises and wanted to strip down our program a bit to separate each session with more specific stimulus rather than having a wide range of exercises with different stimulus. This would give our sessions a lot more focus and more dominance in one stimulus and be more beneficial time wise. I believe this would create productive sessions with the energy my client has. I also find that this way our speed sessions will start to be a bit more sports specific, giving us a bit more time to focus on my athlete's ability to practice more movements mimicking the sport of skateboarding and a way of progressing my client into more challenging plyometrics once he has laid a good foundation in movement and has achieved good force absorption and stiffness. I made the mistake of giving my athlete his test week on his de-load weeks rather than afterwards which I have now started to implement.

Detail the actions to be taken to improve on these areas. Aim to think of a combination of solutions:

I want to take on more skateboarding clients to practice my programming even further and continue to train my case study client. I want to test my new improvements, such as using less exercises and testing my client's performance the week after de-load week to see how my client feels during his sessions. I would also like to see how, what we do in training, has complemented his skating, using feedback as much as possible. I want to finish reading the book "Periodization of strength training for sports by Tudor O, Bompa" and other books I have been recommended by Ste to also gain a wider understanding on how I could improve my periodization and programming skills in order to practice getting the most out of my client's energy and to improve their recovery and performance for skateboarding.

